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CONTENTS FOR 6 FEBRUARY 1939

	Page
THE EARL OF BURLINGTON, mezzotint by J. Faber after Sir G. Kneller, 1734	*Frontispiece*
JOURNAL	323
PRESIDENT'S ADDRESS TO STUDENTS	325
VOTE OF THANKS	332
THE ARCHITECTS REGISTRATION ACTS, 1931 AND 1938	333
PROTECTED SPINE CONSTRUCTION. Norman Davey, Ph.D., M.Inst.C.E., A.F.R.Ae.S.	334
RECENT SWEDISH ARCHITECTURE. Part III	337
THE INSTITUTE APPEAL	354
BOOK REVIEWS :	
THE ROYAL PAVILION AT BRIGHTON. Antony Dale	356
AN AMERICAN HISTORY OF THE GOTHIC REVIVAL. D. H.	357
STAGE DESIGN. Frank Scarlett [*F.*]	357
REVIEW OF PERIODICALS	358
CORRESPONDENCE :	
THE COMPLETION OF THE R.I.B.A. LIBRARY CATALOGUE : H. M. Fletcher [*F.*], Philip James, S. Rowland Pierce [*F.*], Colonel L. Newcombe	360
THE BUILDING INDUSTRY. Alister MacDonald [*F.*]	360
HOUSING IN PADDINGTON	361
OBITUARIES :	
WALTER CAVE	362
L. L. POWELL	362
C. E. BLACKBOURN	363
ALEXANDER MCGIBBON	363
NOTES	363
ALLIED SOCIETIES' ACTIVITIES	364
PROBATIONERS	365
NOTICES	365
COMPETITIONS	366
MEMBERS' COLUMN	367
MINUTES VII	368
ARCHITECTS' AND SURVEYORS' APPROVED SOCIETY	368
ARCHITECTS' BENEVOLENT SOCIETY	368

THE EARL OF BURLINGTON : engraved in mezzotint by J. Faber, 1734, after the portrait by Sir G. Kneller. Recently purchased by the Library Committee

JOURNAL OF THE

ROYAL INSTITUTE *of* BRITISH ARCHITECTS

VOL. 46 3RD SERIES 6 FEBRUARY 1939 No. 7

Journal

How Much and What Registration Does for Architects

On another page is a precise statement of the regulations of the Architects Registrations Acts. They are by no means fully understood, despite their simplicity, yet they form, nevertheless, the central point of the formal organisation of the profession, and should be completely understood not only for what the Acts do, but for what they do not attempt to do and cannot do.

By passing these Acts Parliament established a statutory body—the Architects Registration Council of the United Kingdom—which has strictly limited powers and functions. Under the Act of 1938 it will have the responsibility of deciding who are to be legally entitled to call themselves " architects " in virtue of having their names on the statutory register. That is to say, it will control the *entry* to the profession. It has the further responsibility of striking off the register those who are judged to be unworthy to remain upon it. With the discharge of these two duties its powers begin and end.

All the other activities for the advancement of architecture and for the benefit of the profession which have been carried on by various bodies in various ways for over a century will continue to be carried on by these bodies.

Such matters as the fostering and guidance of architectural education, the international relations with other architectural bodies overseas, the fostering of research, relations with the other partners in the building industry, the rendering of assistance to Government Departments, Municipalities, and other bodies in all matters relating to architecture and architects, benevolent assistance to architects and their families, assistance to architects in obtaining employment, the Form of Contract, the Scale of Charges, the guidance of Architectural competitions, the holding of examinations, the grants of prizes and studentships, the maintenance of Libraries, the publication of Journals and Kalendars, the work of the Public Relations Committees and Panels, the organising of exhibitions, conferences, lectures, meetings of all sorts, the study of the problems of professional practice and the rendering of assistance to architects in connection with them, and a whole host of other functions will continue to be exercised by the various organisations which have been created for the benefit of the profession.

Examples of A.R.P. Schemes

The A.R.P. Committee of the R.I.B.A. wish to collect representative examples of A.R.P. schemes which have been carried out in existing buildings or are projected for new buildings. Members are asked to submit descriptions of any schemes designed by them. These should relate not only to the provision of shelters, but also to any other protective measures included in such schemes to safeguard the structure concerned or to maintain the life or business of the buildings. Particulars of cost would be very useful, and in the case of new buildings the proportionate cost of A.R.P. measures to total cost. Drawings may be sent, if desired, though it is anticipated that simple sketches or key plans would suffice in most cases.

Members will realise the importance of creating a body of technical knowledge on this subject, summaries of which can be published by the A.R.P. Committee from time to time. Co-operative pooling of experience in this way will be of benefit to all. Members submitting descriptions of schemes should state whether they wish the information to be regarded as wholly or

partially confidential. Even little more than a simple statement as to the measures adopted in a particular type of building and the cost, would be of use to the Committee. Communications should be addressed to the Secretary of the A.R.P. Committee at the R.I.B.A.

National Register of Architects

Those architects who have not yet returned their duplicate index cards are asked to do so now without delay. If the cards have been mislaid additional copies can be obtained from the R.I.B.A.

As was pointed out in the last issue of the Journal, the white cards will be sent to the appropriate Government Department and the blue cards will be kept at the R.I.B.A.; the latter are now being classified as the professional register which can be analysed from a professional point of view. There have been constant demands for this from the profession and, now that the opportunity has come to make such analysis a reality, it is most earnestly hoped by the committee organising the register that a really good response will be made. The committee will do their best to answer any questions, though it is not probably that many remain unanswered now. The first and most important thing is for those who have not done so to send in their cards.

The New R.I.B.A. Refugee Committee

At the Council Meeting on 9 January a new committee was appointed, of which Mr. E. C. Bewlay has been elected chairman, to inquire into the whole problem of refugees with a view to supplying the Council with the information necessary to enable them to formulate a policy to be followed in this matter. The refugee problem is one of immense complexity and size : no profession can escape its obligations to discuss the matter and to decide as soon as possible what it is going to do about it. The conflict of loyalties is not easily resolved into a policy ; there is the natural fellow feeling, amounting even to a definite sense of responsibility, for our fellow architects who through no fault of their own are driven, homeless and workless, from their own countries ; the knowledge that it will be a tragic disaster for civilisation if the contribution that hundreds of highly experienced men, technicians and artists, can make to the welfare of the world, not least this country, is neglected or lost ; there is our positive responsibility to the architects of this country to do nothing that will impair the precarious hold that many of them have on their livelihoods. These and many other factors complicate and control discussion on the Refugees question.

Before decisions can be made the new committee must attempt to find out the facts. How many architects from abroad are here now ? How many of them are in employment, how many waiting only until they can move on to one of the British Dominions or to the U.S.A. ? How many are likely to come within the next few months ? What is the present state of unemployment in Great Britain, and what estimate of future conditions can be made by analysis of the general state of the building industry ? What, also, and this is perhaps most difficult of all, is the opinion of the profession generally ? These, it need hardly be emphasised, are urgent questions, directly relevant to the problem which the Refugees Committee has been appointed to study.

Mr. Summerson's Sessional Paper

The next sessional paper is Mr. John Summerson's on The Great Landowner's contribution to the Architecture of London, which he will read on 20 February. The paper will be a study of *motives* and *methods*. Many writers on town-planning, and the growth of London have dealt with the estates in a general way, but the object of Mr. Summerson's study of the subject will be to discover where the motive of development came from and who were the individuals—the *personnel* involved. Thus, the paper will include a short exposition of the machinery of speculative development in the seventeenth-eighteenth centuries, and will give a conspicuous place to great speculators like James Burton and Thomas Cubitt.

The slides will include a few rarities. The Duke of Bedford (who, incidentally, allowed some of his family papers to be deposited temporarily in the Record Office for Mr. Summerson's inspection) has permitted the reproduction of the Van Dyck of the 4th Earl of Bedford, at Woburn and Lord Pembroke's remarkable picture of Covent Garden, at Wilton, has been specially photographed, for the first time.

Synopsis and Advance Proofs

A synopsis of the paper is enclosed with the Journal sent to all members in what we know as the " van delivery area " ; that is an area covering all the membership that could reasonably be expected to come to London for a single meeting. It extends as far north as Cambridge, as far south as the coast, and west as far as Bournemouth and Oxford. Advance proofs of the paper can be obtained by those who hope to be able to take part in the discussion. Usually they cannot be sent until the Friday immediately preceding the date of the paper so that members wanting them delivered to a week-end address must say so when they write.

THE PRESIDENT'S ADDRESS TO STUDENTS

DELIVERED AT THE ROYAL INSTITUTE OF BRITISH ARCHITECTS ON MONDAY, 23 JANUARY, AT 8.30 P.M.

IDEALS OF AN ACTIVE CAREER

On my fourteenth birthday I was given a book entitled *Unwritten Laws and Ideals of Active Careers*. I found it the other day, on a top shelf, and examined its contents. It comprised eighteen essays on as many professions by men distinguished in them, and the last essay in the book was by Alfred Waterhouse on the profession of architecture. "The successful practice of architecture," Waterhouse began, "requires of its votary a manysidedness which pertains perhaps to few other callings. He must be an artist . . . he should be a man of science . . . he should be a man of business . . ., he must, above all, be a scrupulously honest man. . . . He must know when to yield to the requirements of his employer, but if his superior knowledge and experience show him that to yield would be to betray his trust, he must know how to be firm. However conciliatory he may be to those whom he directs, he must know when to make his authority respected."

These qualifications, if necessary thirty-seven years ago, are necessary to-day, and I think are still sufficient. Many people would now add that an architect must be a social student, and in that requirement I only quarrel with the word *must*. When a talent for social study and a talent for architecture are combined in one man, each will reinforce the other and make him a rare and valuable public servant. Sociology, however, is a lifework for any man whose conclusions in it are to deserve attention, and the ordinary architect may well content himself with knowing enough of it to adopt intelligently those opinions upon which experts are agreed.

The "manysidedness" required by Waterhouse was geometrically speaking at least hexahedral, but we must not forget that the six sides he specifies are

but the surfaces of a solid body of architectural proficiency. The ideal architect should be an artist because architecture is an art, he should be a man of science because his material is tractable only in obedience to scientific laws, he should be a business man because unless the cost of his work is economically justifiable he will end by having no work at all. His honesty is especially important because he administers another man's money, his amenability because he cannot work well if he does not work happily, and he cannot work happily if he is at loggerheads with his employer. He should have a character strong enough to withstand any improper commands he may receive and to prevent the evasion of any proper commands he may give. He should, in short, be a complete architect.

THE ARCHITECT'S CHANCE TO-DAY

All this is a great deal to ask of any man or woman, and I expect that most students are conscious of some temperamental difficulty likely to detract in some degree from such universal efficiency. What I want to examine with you this evening is whether or not the "architect," in Waterhouse's sense, is threatened with extinction. This is obviously a matter of great concern to you since your training is thought by many to imply the assumption that he is and must continue to be the normal master of building works. Is he that in fact? He is not. More building is still said to be done without any architect than with one, and yet more building certainly is done with an architect than used to be. We all hope for and work for the time when the employment of an architect of some kind will be universal or nearly so. But of what kind? There can never be enough complete architects, of men self-sufficient in every capacity required of them, to undertake the responsibility for all the building that will be done. I do not believe, however, that self-sufficiency in every required capacity is necessary for a good master of building works: and if your training makes you good masters of building works it will have given you the right to be called architects and to feel pride in your calling. Some of you will be satisfied with that, some will not; neither those who are nor those who are not will have any right to disparage the others.

The conclusion to which I hope my arguments will bring you, as they have brought me, is that the complete architect of the Waterhouse tradition will always be welcomed when he can be found, but that there is also plenty of room for other architects less ideal. From those others, however, we must require at least a minimum standard of efficiency and must pitch that minimum as high as we can. If we come down from ideals to reals we may learn something useful about this from a brief plunge into history.

A BRIEF PLUNGE INTO HISTORY

The architects of the Italian and French Renaissances whose names and designs are familiar to us were men responsible for important works, some of which they actually conducted, some of which they did not. Many of them were painters or sculptors, and none of them worked in conditions sufficiently like our own for their examples to be to us of much practical value. Unimportant building works in their day were conducted by men now nameless and unidentifiable who would certainly have been surprised had the title *architect* been conferred upon them.

The architects of the eighteenth century in our own country were very rarely painters or sculptors and were often not particularly skilled in architecture. Certainly we had our Vanburgh, our Hawksmoor, our Chambers, our Adam, and a few others, but the large majority was made up of men near to our notion of clerks of works, who could concoct a design from Palladian textbooks if no design were supplied to them by their employers, and who knew enough of architectural conventions to control the proposals made by masons, joiners and plasterworkers for ornamental detail.

During the same century in Italy and France the artist-architect, if I may so call him—the architect who is primarily a designer of architecture—had become generally established, and in the early nineteenth century he came to be no less prevalent in England. At that time, too, he began to intervene more and more in the production of small and unimportant buildings of the kind that hitherto had been left to the practitioner with less pretensions. Finally, in the early years of Queen Victoria's reign, the pretensions of all kinds of architects began to level up, until in Waterhouse's time almost all would have claimed to conform to his specification, to be as many-sided as he demanded. The claim may seldom have been supported by evidence, but in most cases was probably made honestly.

VICTORIAN ARCHITECT

Now what actually was this Admirable Crichton, this average respectable architect of the sixty years preceding the last war? He was a trustworthy master of building works, of works that were much

simpler and less hurried than such works are at present. He had a rule-of-thumb knowledge of building science and perhaps a better acquaintance with simple engineering than that possessed by the average architect in our own age of consultant specialists. He was a just taskmaster on the job and an honourable servant to his employer. He was highly susceptible to changes in architectural fashion and exhibited annually at the Royal Academy perspective drawings of designs in which these changes were faithfully reflected. These drawings were made by a hireling, and so, in many cases, were the designs.

It is only in this last particular that such an architect seems to me to have fallen short of what should have been expected of him. I shall not here expatiate on the curious convention that has tempted some architects like some pavement artists to claim as " all their own work " the productions of others. It is a bad convention and one not yet dead, but it is irrelevant to my argument. What I do deprecate is the professional incapacity on the part of the architect to which such designing by proxy is due. And that brings me to the kernel of all that I am saying to you to-night.

SKILL IN DESIGN

An architect *must* be highly skilled in designing. Skill in design is his *raison d'être* and without it he makes no sense at all as a member of society. It is in a category entirely different from that of his other aptitudes—his scientific knowledge, his engineering knowledge, his business experience. In all of those he would be surpassed by scientific, by engineering, by commercial specialists, were it not that his own architectural, orderly outlook gives him a power in those especial provinces that the specialist has not. Skill in design gives universal ability. Learn it first and you thereby learn how to learn everything else. The modern architect claims, and I think justifiably, that his proper contribution to human welfare includes the planning of many other things beside buildings. His claim, however, is justified only by his mastery of his own job, and without that mastery he will be only a presumptuous and unauthorised meddler in other people's affairs.

I said a few minutes ago that a good master of building works had a right to call himself an architect, and to be proud of his calling. I have just said that an architect must be highly skilled in design, and you will therefore deduce that without high skill in design a man cannot in my opinion be a good master of building works. This deduction may be a little surprising, but I believe you will accept it if you weigh the term master and think what it connotes. In a clerk of works designing skill is unnecessary, but a clerk of works cannot claim to be an architect. A good many of the eighteenth-century British architects were no more than clerks of works, but the word *architect* was then loosely used. A clerk of works has responsibility only for how a thing is done, whereas a master of works has responsibility for what it is that is done. He may not have the creative inspiration that would win for him the title *artist*, he may but adopt and develop designs that he owes to tradition, to observation of contemporary work, or to directions received from his employer. But he must have skill, skill, skill ; otherwise his mastership is based on false pretences.

FACT FINDING AND FACT USING

The necessity of architectural skill in an architect might seem so obvious as to need no statement, but you will find that many shallow thinkers lose sight of it. In its place they put knowledge and forget that to possess information is not to know how to use it. According to these misguided people every student should spend much of his all-too-short period of training in the collection of necessary data that could perfectly well have been collected and presented to him in a form ready for his use. He will have to collect data when he is an architect, these people argue, and he cannot begin too soon. Now, the collection of data is an art in itself that cannot be learnt by just collecting data. A man can make investigations all his life without ever learning how to investigate. Unless he knows how to use facts when he has ascertained them he will have no guide as to which facts are worth ascertaining and which are not, and his brain will become no tidy storehouse but rather a jackdaw's nest of aimless pilferings. A student worthy of the name will find out, quick enough, any fact that he needs for an exercise in design, but facts found out before it has proved inconvenient not to know them are liable to clog his mind up and paralyse his invention.

I hope therefore that when people pile up in front of you all the enormous volumes of related information an architect is now supposed to digest and call upon you to devour them you will reply that you are busy learning your craft, and will look at the books when you want them, not before. They may tell you that you will want them in order to learn. You can tell them that you propose to find out what you want for yourselves.

AGAIN—SKILL

What exactly do I mean by " skill in designing " ? I suppose that I had better ask and answer that question. I mean, first, the power of mentally analysing a programme and classing its requirements in the order of their relative importance. I mean, next, the power of making a pattern of spaces and solids in which those requirements in their proper order are each exactly satisfied. That pattern also must meet all the exigencies of logical construction and must have the unity that arrives with the consistent observance of geometric laws. I mean, again, the power of choosing rightly from available forms those forms that best express a building's nature to the eye of the beholder. I mean above all the acquired sensitiveness to small variations of shape and size that enables a designer to keep a design what is called " in scale " ; which is to say that every part of a complex whole is properly related to every other part.

Skill, according to this definition, is possessed by different architects in different degrees—that goes almost without saying. It is usually not possessed in a very high degree by those who are most anxious to convince you that other things are equally important. By the uneducated doctrinaire—and I am afraid that doctrinaires are very likely to be essentially uneducated—architectural skill is regarded as an extra in architectural education like music and dancing in a school for young ladies. Yet it is, in reality, only such skill and the mental power with which it endows its possessor that gives an architect any right at all to meddle with the affairs that the doctrinaire prefers to discuss and handle. Without that skill an architect is not a person having any real claim to be heard on matters of town and regional planning, of preparation for national defence, of setting the stage for social amelioration ; he is merely an outsider butting into other people's special provinces and making a fool of himself.

If the system of your training is right and you give that system a chance, every one of you should become a good master of building works, and in that sense a competent architect. Much of the information you cram up during your schooling you will afterwards fancy that you have forgotten, but if in your minds you tie it all on to an architectural nucleus you will always have strings by which you can pull it back. Some of you will be more than good masters of building works, some of you will be artist-architects destined to enrich the emotional experience of the human race. In a few minutes, as my remarks near their close, I shall say something of our art in its fullest and most noble developments. For the moment, however, I am considering the average architect by whom our average architecture will then as always be produced.

THE NEXT 20 YEARS : THREE UN-PREDICTABLE THINGS

Given a profession of architects all skilled at their job, in what way are their services likely to be chiefly employed ? I expect that you all either heard or have read Professor Holford's charming lecture, *The Next Twenty Years*, a lecture in which our professional horizon was surveyed and our future predicted with great sagacity. If I seem to be covering some of the same ground, it is because this occasion demands it ; as far as possible, however, I am making my remarks supplementary to Professor Holford's rather than parallel with them. I feel no certainty, personally, about the likelihood or unlikelihood of future architects forming themselves more generally than they do at present into groups or large firms. I feel no certainty as to whether the commonest architect in the future will be paid by salary with his jobs found for him or paid by scale with a sporting licence to hunt jobs for himself. I feel no certainty as to whether architecture and civil engineering will remain separate professions indefinitely, or whether they will again become the one profession from which each has sprung. I feel no certainty as to whether our chief work in the near future will be rebuilding what has outlived its use or rebuilding what an enemy has violently destroyed. In none of these things can I predict what is going to happen, but I know what I wish should happen, what I hope for.

GROUPS AND SPECIALISATION

I hope that the tendency of architects to trade together in groups will increase. I think that this practice brings disadvantages that are all avoidable and advantages that can be gained in no other way. To take the disadvantages first, the group is beset by temptations toward a specialisation that is good for the group commercially and bad for the individual intellectually, resulting in an eventual output of stock products that are just as good and no better than they need be to find a market. One man may do the schools, another man the hospitals, another housing, none of them ever sharpening his wits by tackling anything else. Worse still, the specialisation may be not in jobs but in functions ; one man may do all the planning, another the steel-

work, another the dressing up, and yet another the pursuit and capture of potential employers. A group so organised can be useful in producing standardised work of very decent quality, but its members narrow as they age, and ought in the public interest to be liquidated by the State every five years and replaced by new.

Protection against these dangers of specialisation, however, is not difficult. A group of architects, each with his special subject, can pool not only their expenses and receipts, but their ideas, can be as it were a parliament. One of them must be master, since businesses cannot be run by majority vote without delay and confusion. For every design also one man must be responsible, since architecture is an art and not a manufacture. Each, however, can have at least the tip of his finger in every office pie, and can be learning daily more of the other men's special subjects as well as of his own. Experience has taught those in charge of architectural education that what students learn from each other is fully as valuable as what they learn from masters. It has also shown that specialising stunts the growing mind as surely as gin is reputed to stunt the growing body. Groups at their best ought to continue in after life the mutual education that is so useful at school, and to refuse, as being eventually suicidal, any commercial advantages that undue specialisation may seem to offer.

The advantages offered by groups are patent. Private architectural practice is precarious and combination lessens its risks. The pooled knowledge of several men's special subjects will be more than could be found in any one man's head. I have already pointed out the parliamentary value of the group, and with the right men rightly associated that value can be very great indeed.

Groups will be paid by scale, architectural departments by salary. Most of what I have said about the group applies also to the department, but with two essential differences. In the first place, the department will be hierarchical rather than egalitarian, the architects in it will be graded in position and authority. In the second place work will come to it automatically and will not have to be sought in the open market or by means of competitions. I hope that success will crown the efforts being made by many of the big men in this branch of our profession to remove its admitted defects. That the name of the designer responsible for each building should always be published is a goal towards which great progress has already been made. That there *should* always be one designer responsible for each building and working with all allowable freedom is another principle that is gaining acceptance. A great many of you, after comparing the prospects offered by private practice and by salaried practice, will probably decide in favour of the salaried. To those that so decide I say "Take care that the department you enter is one that provides you not only with a means of living but with something to live for. There are departments in which your powers will get full scope and recognition, and in these you may be as happy as any architect alive. There are others that you would regret having entered. The Official Architects' Committee of this Institute is always at work trying by precept and practice to level all departments up to the standard of the highest and I hope that before Professor Holford's twenty years have expired such words of caution as these of mine will have become no longer necessary.

A HOPE: ARCHITECTS AND ENGINEERS

The eventual union between the professions of architecture and of civil engineering is a long-distance hope of mine, but one on which I set great store. While the post-Renaissance convention of architecture held, divorce between the two professions was understandable if not defensible; there were only certain things the haughty art was prepared to do, and the ways of doing them were well known and not such as to necessitate much consultation. Now that architecture has set out upon one of her periodic voyages of discovery, the exploration of all constructional possibilities is regarded as not only lawful but expedient. Such exploration can be made by an architect and an engineer hand in hand, but I cannot help thinking it could be made better still by a man who combined the two roles in himself. It is to such men that we probably owe the masterpieces of the Middle Ages and a few of the remarkable works of to-day. Neither profession, however, is yet ready for unification with the other; architects in general are not yet sufficiently awake to the true logic of construction, nor engineers to the science of orderly design. A partnership between two friends, one of either profession, is however perfectly possible already, and is an arrangement I would gladly see becoming usual.

WAR OR PEACE

I have now told you my own hopes about three of the four things in the future that I mentioned as unpredictable. About the fourth we all have but

one hope. We hope that the menace of war and the destruction it would bring may be lifted and that the happier England we all long to plan may rise peacefully from the England we have and not from a scene of havoc wrought by war. I think it is now plain that war can only come upon us when all possible doubt as to its motive has disappeared ; that we in this country are past the folly of fighting for material wealth and would take up arms only in defence of ideas that are more precious to us than our lives. We will fight only for the things of the mind and the spirit, for Christendom and the ideal of freedom, and for the human rights of the weak. The fine arts are things of the mind and the spirit, and we must take care never to forget that architecture for all her willing service to material needs stands high among the fine arts and is often acclaimed as their queen. It is no folly or selfishness in the artist that he lives for his art as other men live for their beneficent activities, their material usefulness or their political creeds. The forces that we fear in the world to-day may command some good architecture, because a true artist is always the master of his employer in skill and perception. But those forces appear to be arrayed against all the finer activities of the intellect, and it is only with constant refreshment from those activities that artists can long survive.

ART

Waterhouse stipulated that an architect must be an artist ; I find that rather a big word, and, as I have said already, would accord the title *architect* to the good master of works who has acquired skill in designing. Whatever we mean by the terms *artist* and *master of works*, we all must recognise that our profession has ample room in it for two kinds of architects—the born and the made. Some people become architects because architecture has called them to her as her children, others for good mundane reasons which because they are mundane are not any less to be respected. I have spoken so far of the aspect of architecture that is mundane of necessity, of the professional side of what is both a profession and an art. Possibly the æsthetic aspect of architecture would need no disquisition here were it not that its human importance tends to be underrated so ignorantly by those whose field of vision is limited by the blinkers of materialism.

THE WISEST WRITER ON ARCHITECTURE

The wisest writer upon architecture that I know of devoted a whole lecture to a definition of art because, as he justly says, any *brief* definition of art that a man may put forward will be understood only by those who already know as much about it as he does. His long definition obviously cannot be quoted now, but some passages taken from it will express what I want to say far better than any words I could find for myself. " Art," he says, " is an instinct, the fulfilment of a spiritual need, which to make itself understood uses various means : but there is only one Art as there is only one Reason, only one Wisdom, only one Desire. Art is one stream that divides into several channels ; the orator, the poet, the musician, architect, sculptor or painter but seek different ways of expressing one sentiment that dwells in the soul of every sensitive man. Which of us has not, at least once in his life, felt when listening to poetry or to music, when looking at a building or a statue or a picture, certain emotions such as awe, sadness, uneasiness, joy, hope, or regret ? It seems, moreover, that the farther arts are removed from the imitation of Nature the better they are able to touch in our souls those deeper chords, those chords that vibrate the longest." Turning for a moment to history, he says of music that it is the oldest of the arts, and sprang from intonation. Intonation springs from a desire to impart emotion. " One does not teach children intonation ; even before they can talk they express by particular sounds and rhythms their wants and their feelings, no matter whether they were born in Paris or in Peking. . . . This intonation is already art. . . . Say to a crowd of people ' Your houses are being sacked and your wives butchered ' in the same tone you would use to say ' Let's have some supper,' and not a soul will move ; but if your intonation suits your words, and is accompanied by an appropriate gesture . . . you will rouse the crowd and convey to it your own horror. . . . From intonation to melody is but a step—and behold ! Music is born."

So of architecture, " to make a hut of rough branches is not art, it is the fulfilment of a material need ; but to scoop a dwelling out of a cliff, to divide your cave into rooms of sizes to suit the needs of their inhabitants, and then to engrave on your walls and pillars signs intended to preserve the memory of an event—the birth of a child, the death of a father or a wife, a victory over an enemy—that is already art. . . ."

These two arts, removed farthest from the imitation of Nature, can nevertheless evoke in the mind the same emotional response that the poet would arouse by describing some natural scene. Suppose,

for example, that natural scene to be the sea shore. "In his proper language, the conjunction of sounds, the musician can depict to you the grand prospect of the sea ; he will do it by awakening in your mind ideas analogous to those that would come to you were you meditating on the beach, the beach that the poet would describe in actual words. The same ideas can be awakened by the architect in the language that in turn is proper to him. If he draws beneath the sky a long horizontal line which your eyes can follow without interruption, your mind will be filled with a sentiment of calm grandeur from which will spring ideas analogous to those produced in it by the spectacle of the sea itself."

From a chapter every line of which is quotable I must now quote no more except a further conclusion to which its argument carries it. "From the philosophic point of view there is only one art, assuming diverse forms in its action upon the spirit of man : and when these forms combine in the same place at the same time, with the same inspiration, each speaking in its proper language, to influence the senses, they can then produce the most vivid and lasting impression that a thinking being can receive. I remember well that one day, when I was a very little child, my nurse took me into the church of Notre Dame. I can see now the exact place where the crowd forced us to stop. I was gazing fixedly at the rose window through which the sun was sending coloured rays when suddenly the organ burst out ; I thought it was the rose window singing. My nurse tried to undeceive me ; but in vain. As my impression deepened I became convinced that certain of the coloured sections produced the low notes, and others the high ones, until I was so terrified that I had to be taken out. It therefore cannot be education that sets up in us these strong correspondences between different expressions of art." No, it is not education, it is human nature ; and the experiences for which the various kinds of art form the channels are among the most precious of human blessings. The noblest among those experiences are things to live for and, if need be, to die in order to defend. Those of you that are born architects will know this without any telling. Those of you that are made architects will know it also, even though no vivid personal memories may be yours to confirm its truth. Architecture beside being a valuable public service is a channel through which flow experiences necessary to civilised man, experiences without which his emotional life is incomplete. It is the duty of all of us to keep that channel unchoked by the deadly weeds of indifference and error. The blind men who sneer at æsthetics may have minds of a sort, but they are blind. Let there be no architects among them.

Miss Dora Gordine's portrait bust of Mr. Goodhart-Rendel

VOTE OF THANKS

Mr. H. G. STRAUSS, M.P. : We have listened to a brilliant, true and eloquent address, and, as I listened to it, I thought that I had never heard a scholar who wore his learning more lightly or a teacher who published his wisdom with more charm. Architecture, he said, was the queen of the arts. It is, indeed, the greatest and the noblest of the arts, and of all the arts, when it is good, it spreads the most exquisite and the most constant pleasure. Equally undoubted, I think, is the proposition that when it is bad it is of all misconceived activities the most unquestionable public nuisance ; it spreads debasement and pain in a never-ending stream.

To-day, beyond all doubt, bad architecture is a greater evil in England than drink and drugs put together. It astonishes me very much that in the semi-barbarism in which we live, while it is a criminal offence to publish an indecent book, it is not punishable to erect an indecent building ; yet the indecent book may never be read and it may not corrupt even if it is read, whereas the indecent building depresses and debases everybody who sees it from one generation to another.

But, looking as the President did into the future, I wondered whether a more practical suggestion might not be this. I have made it before, but I make it once more to this influential assembly. It is that on such occasions as His Majesty's birthday there should be published not only an Honours List but also a Dishonours List, when the Order of Atrocity, Third Class, might be given to those speculative builders who provide us on every by-pass with those well-known alternatives, the Cosy Palace, the Bijou Baronial Hall and the Tudor Garage.

Be that as it may, I say that there was one thing, and one thing only, wrong with the President's address to-night, and that was that it was delivered to this limited assembly of distinguished students of architecture. It should have been broadcast to the nation. I beg to move a vote of thanks to the President.

Professor A. E. RICHARDSON, A.R.A., F.S.A. [*F.*] : Need I say that I, too, have listened to this work of art with the very keenest pleasure ? Indeed, it would be impertinent for me to add anything to it either in praise or in criticism. Our President is gifted with a geometrical mind ; he describes circles and rose windows, and this at a period when few estimate the value of geometry. The first circle is the eye, which receives and controls all effects, visual and æsthetic. It was St. Augustine who said " God is a circle ; the centre of which is everywhere and the circumference nowhere." We want more sound philosophy to-day, such as the address to which we have just listened ; a message directed not to students alone, but to men of maturity. Unlike some ancient past presidents, the President has addressed the youngest in this room as though fully qualified as architects. In the past we were accustomed to dogmatic tutelage ; we were told " This is a watch," and we longed to smash it to investigate the mechanism at first hand.

My own impression is that everybody in this room has wanted something out of the ordinary to be said. Well, we have been fortunate in listening to such an address. I do not intend to say anything startling myself. You will have noticed that in the President's address there are approximately twenty-one sections, and that each of those sections would form matter for a serious debate taking at least an evening ; but it was the last sentence that struck most deeply into my mind, and I hope into the minds of others, and this sentence contains the gist not only of the address but of everything that is in our inmost thoughts. It is this : " The blind men who sneer at æsthetics may have minds of a sort, but they are blind. Let there be no architects among them."

At this critical juncture in the affairs of architecture, when something new is being sought, the President has indicated the only reasonable procedure. It is a new approach to the æsthetics of architecture. This is the move already being made by the cultured. This twentieth century is nearly half-way through its course ; we have seen the evils of a series of experiments, which have done little to improve the art. That is a very unsatisfactory shock to our minds. The President has given us a ray of hope—æsthetics ; no longer will critics sneer at æsthetics as something " precious." Æsthetics are personal as well as collective. There are no rules for them ; they are part of artistic intuition ; and profound as the depths of human thought.

In the old days we learn that there were giants among the architects—I do not agree that some were clerks of works. The outstanding figures were really giants. To-day there are myriads of dwarfs. Should we be very far wrong if we likened architecture to the story of the Princess in the film who has been put to sleep by a zealous rival. The dwarfs and the pygmies chatter, but they fail to awaken the lady. In their rage they pursue the hideous queen ; she climbs to the highest pinnacle, grips the rocks, the rocks give way, and she is hurled into the abyss and the boulders fall on her. If I said more it would be an anti-climax ; I have great pleasure in seconding the vote of thanks.

The HON. SECRETARY put the vote of thanks, which was carried unanimously with prolonged applause.

The PRESIDENT : I thank you very much for that vote of thanks, and I thank the proposer and seconder most warmly. I feel very embarrassed at the things which have been said about my address, which was full of holes which you could have put a finger into ; but it did embody what I really believe and have thought it my duty to say on this occasion.

The suggestion of an Order of Dishonour interested me, because that experiment was tried when I was very young by one of the architectural journals, which started something called a Pillory, and produced a photograph of one building—by a distinguished member of this Institute—with a few comments underneath it. But the pillory got no further, and the last was not heard of the matter for some time. Although I have tried to do a little in the same way myself occasionally, I find the results discouraging, and one doubts whether, after the storm one produces, one has really done any good in the end.

There is nothing more to say, except to thank you extremely.

THE ARCHITECTS REGISTRATION ACTS, 1931 and 1938

Members of the R.I.B.A. and of the Allied Societies who have not yet registered under the Architects Registration Acts are strongly advised to make application for registration without delay.

The Architects Registration Act 1938 provides that no person, after 1 August 1940, may practise or carry on business under any name, style or title containing the word " architect " unless he is a person registered under the Architects (Registration) Act 1931. After 1 August 1940 no person will be eligible for admission to the Register of Architects unless he has passed one of the examinations recognised as a qualification for registration.

The Architects' Registration Council are prepared to consider applications for registration under Section 2, sub-section 1, of the Architects Registration Act 1938. The sub-section reads as follows :—

> " Notwithstanding anything in the principal Act, a person shall, on application made to the Council in the prescribed manner after the passing of this Act and before the first day of August nineteen hundred and forty, and on payment of the prescribed fee, be entitled to be registered under the principal Act, if he proves, to the satisfaction of the Council, or, on an appeal under this Section, to the satisfaction of the tribunal hearing the appeal, that at the date of the passing of this Act he was, or had been, practising as an architect in the United Kingdom or in some other part of His Majesty's Dominions."

In accordance with Section 5 (3) of the Architects (Registration) Act 1931 all applications for registration have first to be considered by the Admission Committee, who will report thereon to the Council.

An applicant for registration should write to the Registrar, the Architects' Registration Council of the United Kingdom, 68 Portland Place, London, W.1 :—

(1) Enclosing a postal order for 1s. for a copy of the Council's regulations ; and

(2) Stating under which one or more of the following qualifications he intends to apply, in order that the appropriate form or forms of application may be sent to him, viz., whether—

(A) he is an architect member of the Royal Academy or the Royal Scottish Academy ;

or (B) on 29 July 1938 was, or had been, practising as an architect in the United Kingdom ;

or (C) on 29 July 1938 was, or had been, practising as an architect in some part of His Majesty's Dominions other than the United Kingdom.

The phrase " His Majesty's Dominions " includes all the Dominions (including Ireland), India, Southern Rhodesia and the Colonies, but does not include protected States, protectorates or territories administered under a League of Nations mandate by the Government of the United Kingdom or of a Dominion.

or (D) on 1 August 1938 was an architectural assistant and at that date had been engaged in the study of architecture and execution of architectural work in the United Kingdom for at least seven years ;

or (E) has passed an examination in architecture which is for the time being recognised by the Council.

PROTECTED SPINE CONSTRUCTION

By NORMAN DAVEY, PhD., M.Inst.C.E., A.F.R.Ae.S., *of the Building Research Station*
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In the present state of world unrest it would seem desirable, when designing a new building, to consider not only the peace-time efficiency of its design but also its efficiency under war conditions. If a design can be evolved in which a reasonably high degree of war efficiency can be attained, while yet retaining the high standard of efficiency called for in peace time, then the consideration of such a design must be worth while.

From the viewpoint of war efficiency the chief points to be considered are :—

(*a*) *The degree of resistance* that the structure can offer to shock and to attack by incendiary bombs.

(*b*) *The degree of protection* it can offer to its occupants during an aerial bombardment.

(*c*) *The ease* with which it can be renovated in the event of its having suffered structural damage.

The problem arises therefore of designing a building the main structure of which will remain stable during an aerial attack, will afford adequate protection to its occupants, and can be readily repaired.

To achieve these aims the principle of construction illustrated diagrammatically in Figs. 1 and 2 is suggested. The central spine, or stem, has a dual function. It not only provides an adequately protected area accom-

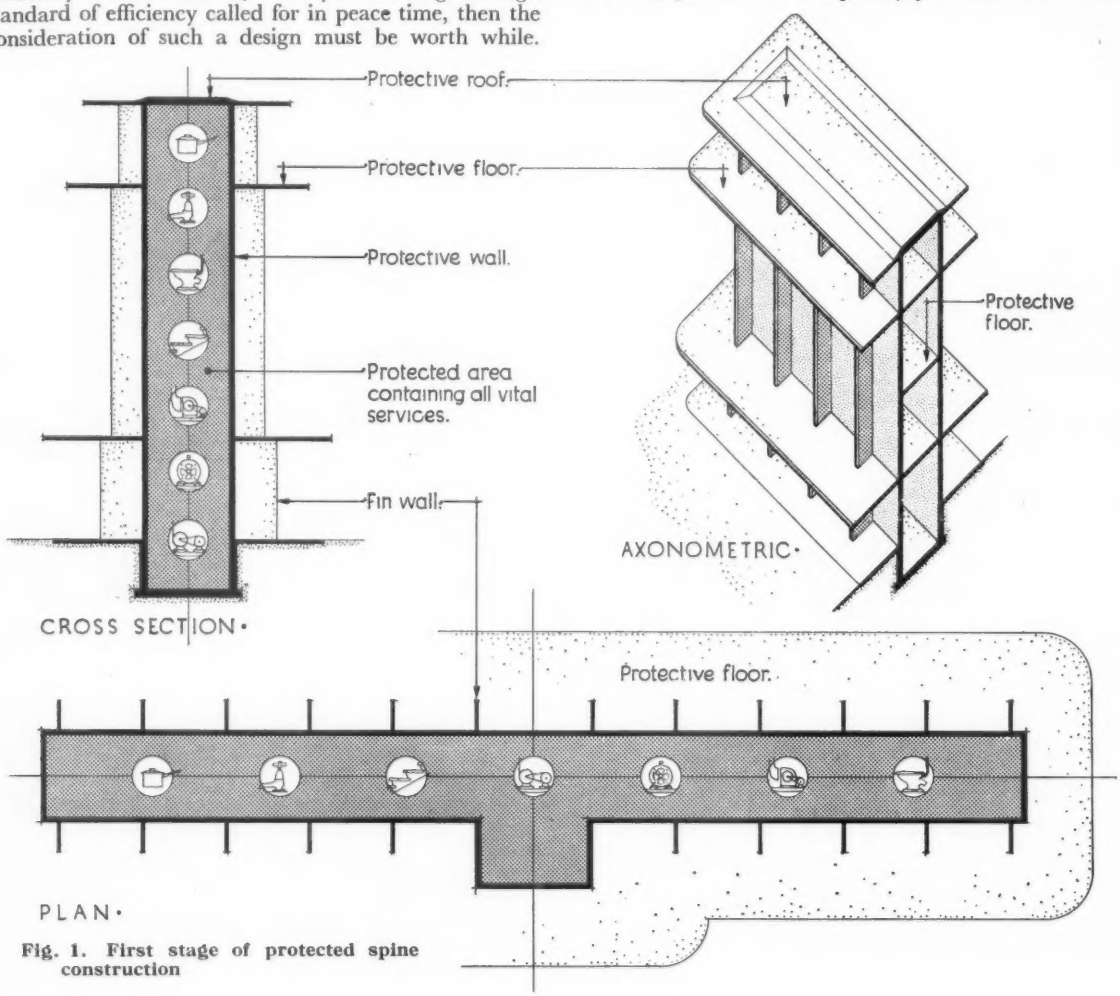


Fig. 1. First stage of protected spine construction

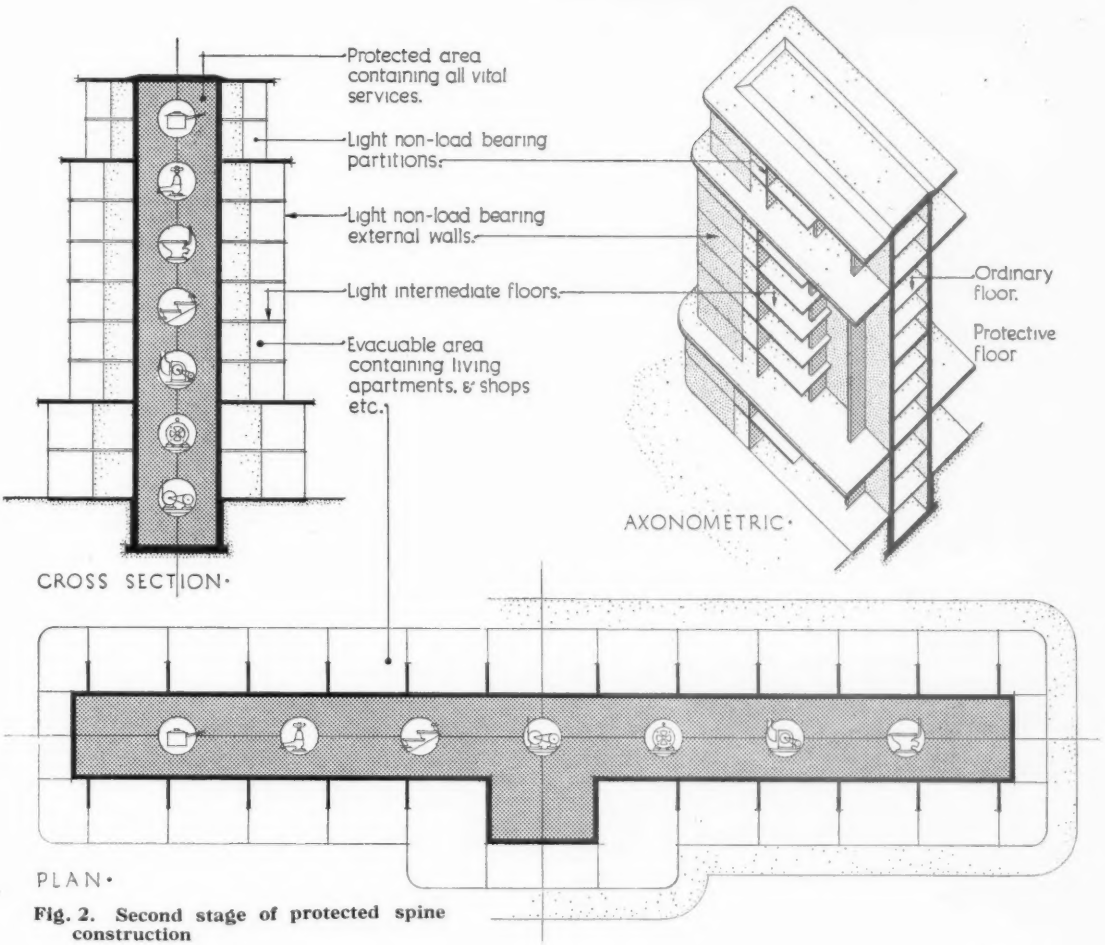


Fig. 2. Second stage of protected spine construction

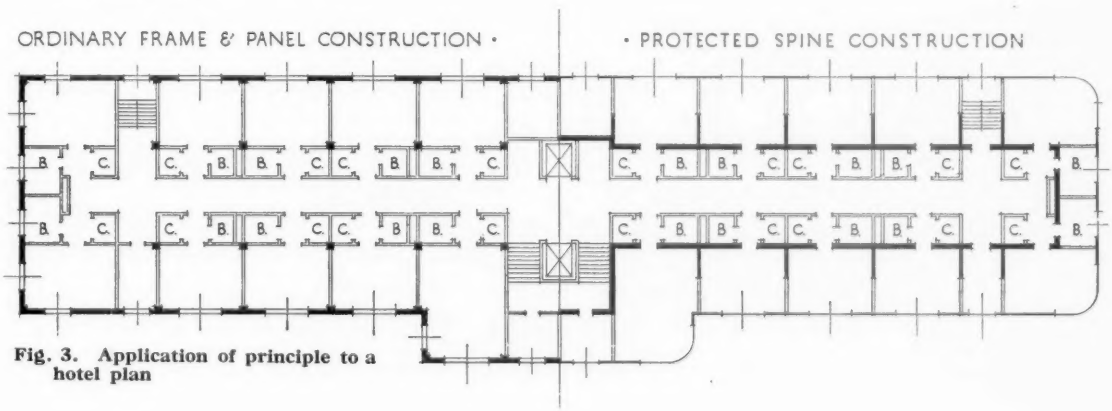


Fig. 3. Application of principle to a hotel plan

modating all vital services within it, and extending the full height of the building, but it also carries the whole load of the superstructure. It supports the protective floors which are built monolithically with it, and is capped by detonating and protecting slabs.

The protective floors* are of sufficient thickness to resist the penetration of incendiary bombs and strong enough to support the weight of the floors above in the event of a collapse of the upper portion of the building ; the intermediate floors can be of lighter construction. *The external walls are non-load bearing* and are also of light construction, their main purpose being to afford protection from the weather. *The strength of the building is concentrated in the central spine.*

Each floor has its own protected area, and in an emergency the occupants of the outer rooms could move towards the centre of the building into this area. The redistribution of people, if necessary, within this area towards the basement can proceed with reasonable safety, and without undue haste. The provision of immediate shelter on the spot and within an area familiar to the occupant must be important from the psychological standpoint. The panic rush to an outside shelter, or to a shelter in the basement of a building, is avoided, and the whole population of a building can be readily and quickly catered for without undue inconvenience.

Such a building will offer great resistance to attack, and in order to damage it irreparably the central spine would have to be demolished by a series of direct hits upon it. As the area of this spine is comparatively small the vulnerability of the building is greatly reduced, and the possibility of a series of direct hits occurring can be considered as a somewhat remote possibility. A bomb falling outside the protected area, either on the building or in the immediate vicinity of the building, although possibly causing appreciable damage to the external walling and the lighter floors, would probably not jeopardise the stability of the structure as a whole, as might be the case in a traditional type of building with the load carried on the external walls. The probability is that the protected spine would remain intact, and in consequence the debris could be quickly cleared away without the fear of a major collapse.

The spine would provide a nucleus around which to carry out the work of renovation. Reports from Barcelona have shown that in buildings of the traditional type in which the load is carried on the outer walls or on columns, rescue and reconstruction work may be very seriously hampered and attended by grave risks. Such risks would be eliminated and the cost of renovation very greatly reduced by the use of the form of construction suggested.

The rigidity of the building is greatly increased by allowing the partition walls which are built monolithically with the floors, as shown in Fig. 2, and which extend outwards from the core, to act as supporting ribs or fins. These walls can be utilised also for supporting the intermediate floors, which, as already noted, may be of light construction. The utilisation of the walls as stiffeners in the manner suggested will tend to reduce the cost of construction of the floor slabs ; and would provide additional protection from splinters.

The principle can be readily applied to many types of building such as hotels, offices, flats, clinics and hospitals ; buildings in which immediate protection in an air raid is such a vital necessity.† An illustration of its application to a hotel is given in Fig. 3, which shows how readily the existing plan can be modified, so that all vital services are maintained within the protected area.

The lighting system in the protected area is independent of that for the outer rooms. In the event of an air raid the lighting outside the protected area could be cut off, thus plunging the building into complete darkness from the outside. The lighting of the protected area would be maintained as under normal conditions ; the electricity for supplying this and the power for operating the lifts, etc., being supplied by an auxiliary generating plant, housed in the basement. In a similar manner, the ventilating system could be subdivided so that in the event of an air raid the ducts to the rooms outside the protected area are either closed or used for exhaust purposes only, thus reducing the possibility of gas penetration, while those ducts within the area are kept in operation as usual, thus maintaining proper ventilation. The fresh air intake is arranged at the top of the protected area.

To sum up, the principle of construction described above offers the following outstanding advantages :—

(*a*) It affords immediate protection on all floors ;
(*b*) all vital services are accommodated and maintained within the protected spine ;
(*c*) The strength of the building is centred round the protected spine, which offers a comparatively small target ;
(*d*) The possibilities of a complete collapse are reduced to a minimum, the work of clearing debris would not be attended by such grave risks as with the traditional form of construction, and could proceed more quickly, thus facilitating rescue work ;
(*e*) The spine forms a nucleus around which the work of renovation could proceed more quickly, and the cost of such work should be very greatly reduced below that which would be anticipated with the traditional type of building ;
(*f*) There is no sacrifice of peace-time efficiency.

* In the Report of the R.I.B.A. Conference on Structural A.R.P. (R.I.B.A. JOURNAL 27 June 1938) floors of this type are called "demolition slabs."—EDITOR.

† The building regulations of most urban authorities would not at present permit some of the planning arrangements (i.e., interior staircases) on which the full effectiveness of protected spine construction depends. It should be realised that the construction would be allowed by most American urban building codes, which British practice has recently tended to follow.—EDITOR.

RECENT SWEDISH ARCHITECTURE

PART III

Concert Hall, Gothenburg
Technical Museum, Stockholm
Extension to Gothenburg Town Hall
Ribershus Housing Scheme, Malmo

Part I, an introductory article on recent Swedish architecture, and Part II, dealing with municipal small houses, appeared in the 9 January 1939 issue of the JOURNAL

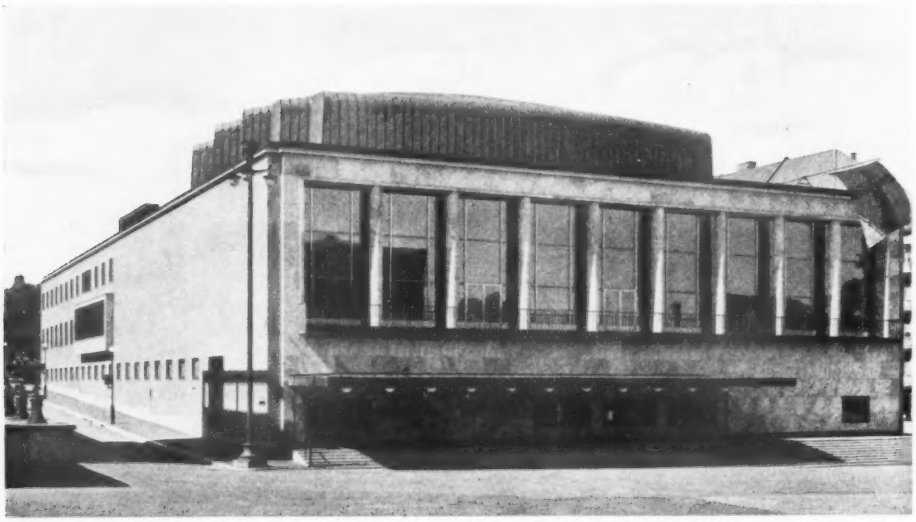
This, the third article of the series, illustrates and describes four typical large buildings which have been selected from among the many visited, to show the high standard of design in all types of building.

The first, Eriksson's Municipal Concert Hall at Gothenburg, is a highly-finished building using expensive materials—a comparative rarity in modern architecture. Its brilliant plan, dictated by acoustic design and by circulations, illustrates well the severely logical approach to their problems by contemporary Swedish architects. Hjorth's Technical Museum at Stockholm will undoubtedly serve as a model for museums for some time to come. Directors of English museums would also do well to visit it and talk with the Director, Torsten Althin. They would see a museum which is a living educational force and not a mere collection of antiques.

Asplund's Town Hall Extension at Gothenburg reveals the charming delicacy of which modern architecture is capable, specially when in the hands of Asplund. It is boldly novel, without personal eccentricities and completely satisfying to the eye. The Ribershus at Malmo is a vast scheme of luxury flats by three architects and an engineer. It illustrates planning for air and sunlight as opposed to planning for pattern effect on paper. As a technical piece of flat planning it is well in advance of its time.

The direct approach to architectural problems, the skilful planning, the charming simplicity of design, the high standards of workmanship and the logical use of good materials shown in these four buildings are characteristic of Swedish architecture to-day.

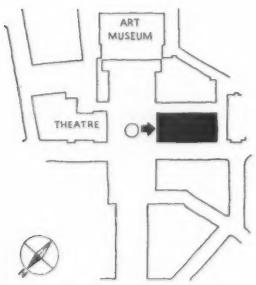
Right: Typical of the many Stockholm bridges
Below: Kiosk in a park; the frame holds an awning



The main front of the theatre. The structure is faced with light green marble slabs and has a copper roof

GOTHENBURG CONCERT HALL

Architect : NILS ERIKSSON



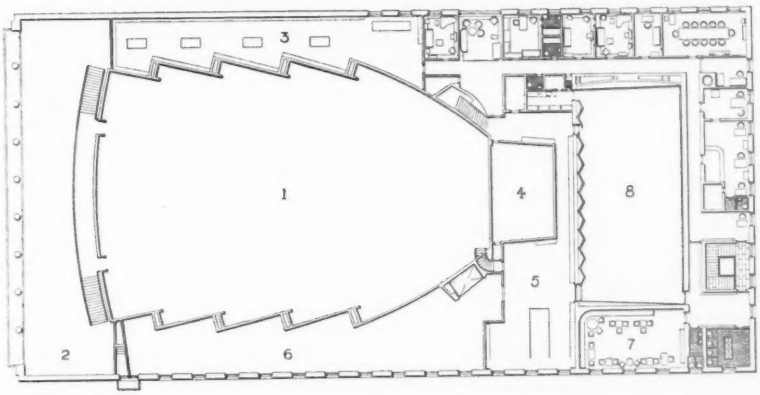
Site Plan

This building completes a formal layout at the end of the Götaplatsen. (See site plan.) Closing the axis is the Art Gallery which was a permanent building in the Gothenburg Exhibition of 1923. On the left is the Municipal Theatre, built a few years ago by Carl Bergsten. Facing it is Eriksson's Concert Hall, and in the centre is a bronze fountain by Carl Milles.

The form of the concert hall is essentially an acoustic shape enclosed within a rectangular box, the intervening spaces being foyers and general circulation space. At the back is a small concert hall. The two entrances are side by side on the main front, and are enclosed by stainless steel and plate-glass screens and doors. Approach to the main hall is through a very large foyer at ground level, flanked by ample cloakroom counters. At the end a wide and simple stair, lined with green marble, divides and ascends to first-floor level, giving access on either side to the lower levels of the concert hall proper.

The shape of the hall interior has been conditioned almost entirely by acoustic geometry and calculations. As a result the walls slope gently inwards, are stepped on plan and run into the ceiling in easy curves. The whole of the walls and ceiling surfaces are covered with plywood. These surfaces are broken only by slots for the indirect lighting, by doors and by the organ opening which is masked by an obviously fanciful arrangement of dummy pipes. The bold asymetrical entrance for the star performer, descending to the platform is a skilful dramatic touch. Neither photographs, drawings or descriptions can really express the effectiveness of this interior.

The upper levels of seating are approached by a balcony cantilevered over the front upper foyer. The front of this foyer is of glass so that there is a wide view from the balcony across the square with its fountain to the theatre opposite. The small hall at the back is intimate and simply decorated with wood inlay pictures by Dahlskrog.



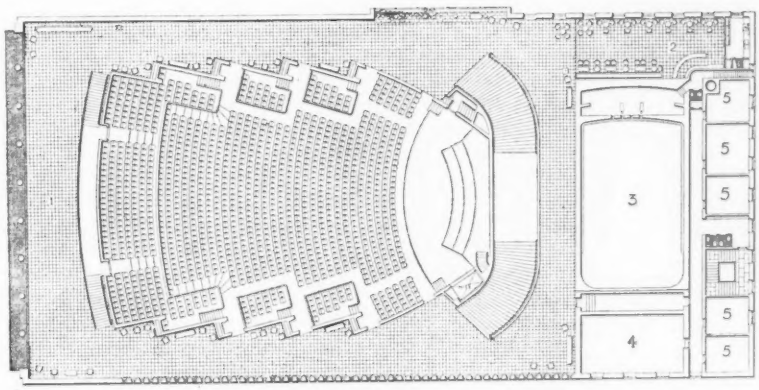
Second Floor

Second Floor—
1. *Upper part of large concert hall*
2. *Upper part of foyer*
3. *Library*
4. *Organ loft*
5. *Orchestra room*
6. *Store*
7. *Musician's foyer*
8. *Rehearsal room*

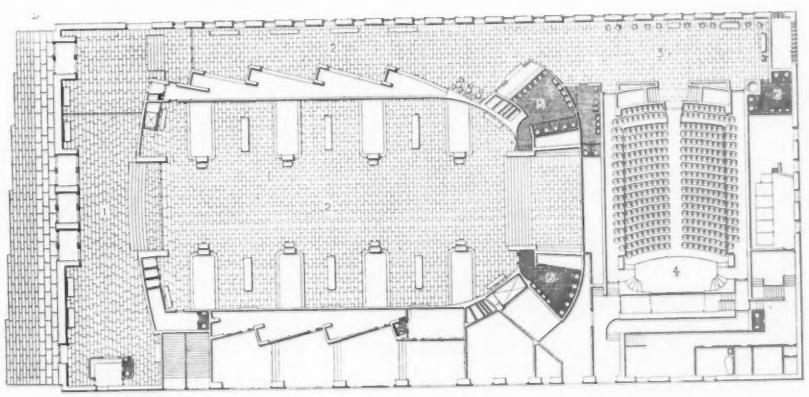
First Floor—
1. *Foyer*
2. *Bar*
3. *Upper part of small concert hall*
4. *Green room*
5. *Dressing rooms*

Ground Floor—
1. *Vestibule*
2. *Cloakroom*
3. *Foyer*
4. *Small concert hall*
5. *Men*
6. *Women*

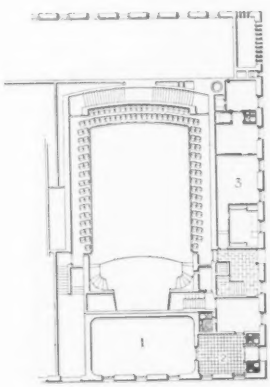
Gallery level—
1. *Room for letting*
2. *Cloak room*
3. *Porter's flat*



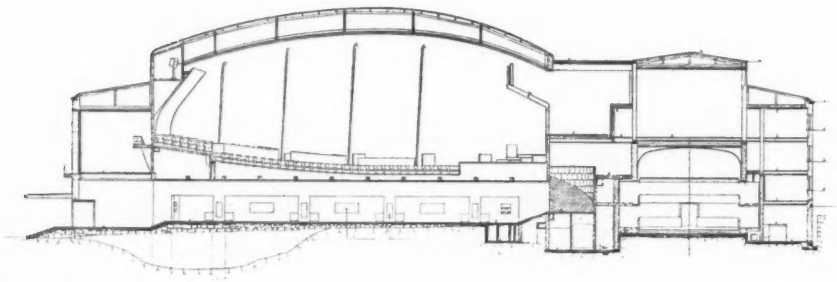
First Floor



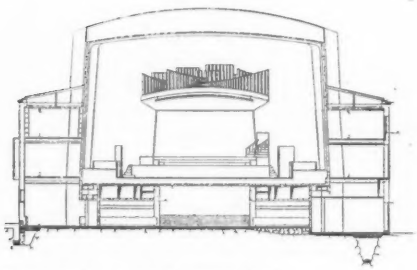
Ground Floor



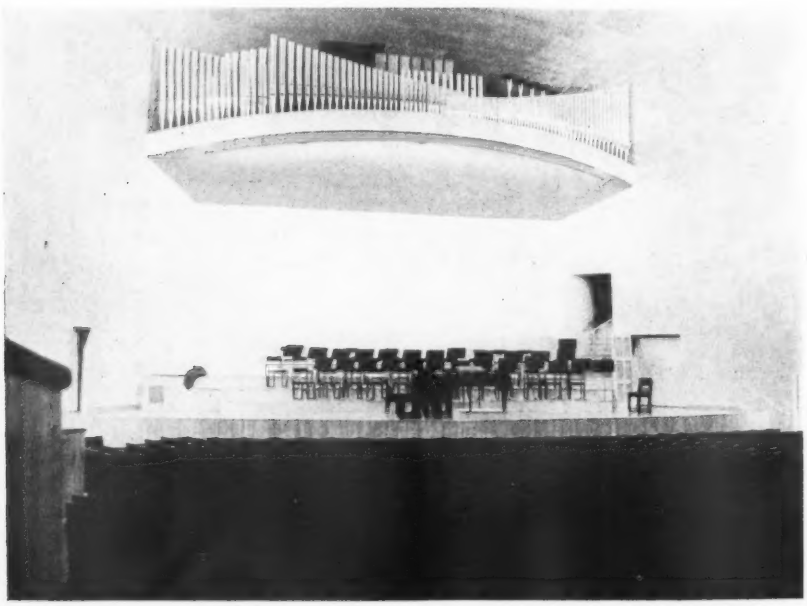
Gallery level



Longitudinal section



Cross section through concert hall



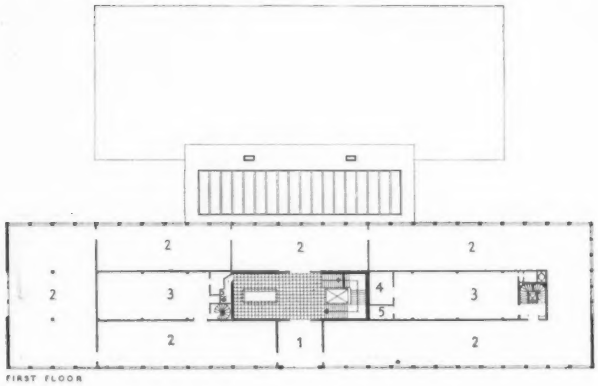
Photographs do not do justice to the superb interior of the concert hall, which is an acoustic shape lined with sheets of light brown plywood

Right: The main foyer on the first floor. The balcony gives access to the upper tiers of seats in the hall

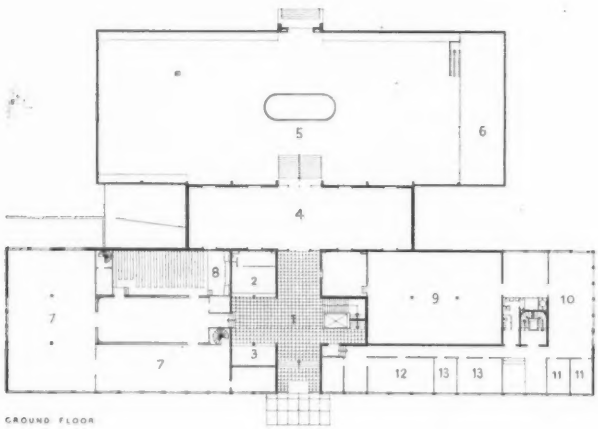
Left: A corner of the foyer

TECHNICAL MUSEUM, STOCKHOLM

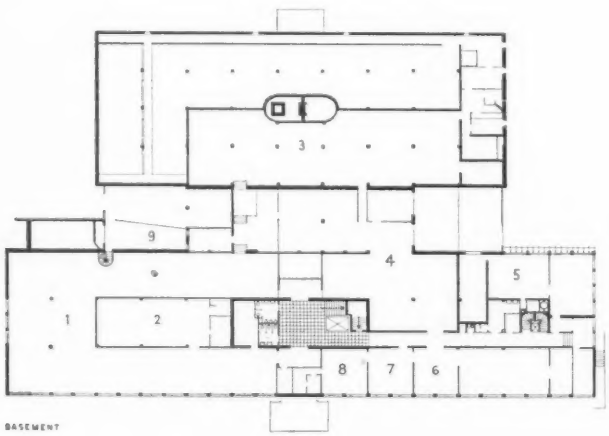
Architect : RAGNAR HJORTH, of the Board of Works and Public Buildings



FIRST FLOOR



GROUND FLOOR



BASEMENT

Key—

First floor—

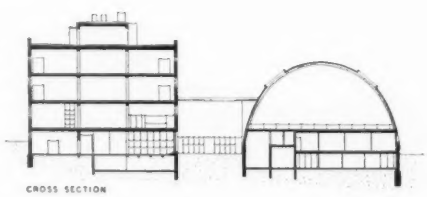
1. *Reading room*
2. *Exhibition space*
3. *Stores for study*
4. *Lift motor room*
5. *Store*

Ground floor—

1. *Entrance hall*
2. *Porters*
3. *Cloaks*
4. *Hall of Fame*
5. *Machinery hall*
6. *Gallery*
7. *Temporary exhibitions*
8. *Lecture hall*
9. *Files*
10. *Study room*
11. *Small study rooms*
12. *Officials*
13. *Head official*

Basement—

1. *Exhibition space*
2. *Store for study*
3. *Iron mine*
4. *Store*
5. *Boiler room*
6. *Assembly room for models*
7. *Cataloguing*
8. *Photographer's room*
9. *Intake*


CROSS SECTION

The new Technical Museum is remarkable both as an institution and as a building. The purpose of the Museum is to relate the history and to show the present scope of applied mechanics. It therefore contains examples of machines from the earliest obtainable up to those of the present day, arranged to tell a consecutive story. As far as possible, all machines are made to work, either under their own power or by electric motors. The largest exhibit is a beam engine built in Sweden by Samuel Owen, an Englishman, in 1832. This is driven by a concealed electric motor. The heating, air-conditioning and lift machinery of the building itself are also all open to inspection as exhibits. The organisation of this very interesting building owes a great deal to the Director, Torsten Althin.

The building consists of three units—a multi-floor museum block, a machinery hall, and, between them, a " Hall of Fame." In plan the museum building is three bays wide, the outer two forming a suite of exhibition space, and the inner housing the stairs, lifts, lavatories and storage space of extra exhibits for students. On the top floor is a restaurant and the Director's flat, occupying the central bay. The outer bays are a terrace accessible to the public, and here from time to time the old motor-cars are brought up by lift and driven round.

The main entrance front

The machinery hall

The " Hall of Fame " contains busts and portraits of famous Swedish engineers and scientists. It is a rectangular room, and lit by a flat laylight. The machinery hall is a structure of parabolic trusses, and is lined throughout with untreated asbestos-cement sheet, fixed with stainless steel screws. Daylight is admitted through continuous clerestory lights which follow the curve of the roof. Artificial light is indirect from wall fixtures. In its very simple and bold effect this hall is magnificent.

The building has altogether about 9,000 square metres of floor space, of which 65 per cent. is for exhibition purposes. The machinery hall has a floor area of 1,300 square metres. In the basement below it is a full-scale reproduction of a Swedish iron mine. This remarkable museum is certainly a model to be studied for new buildings of this kind, not only for its planning, but also for its detail organisation.

GOTHENBURG TOWN HALL EXTENSION

Architect: ASPLUND

The waiting gallery for civil marriages and the stair leading to it. The flowering creepers are trained on wires

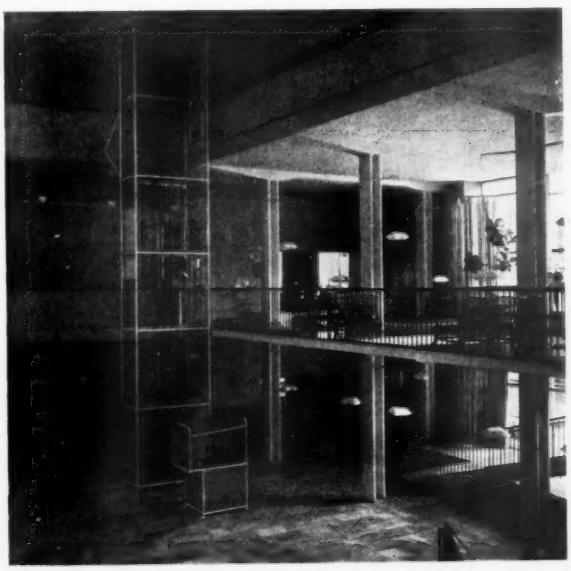
The old town hall is an eighteenth-century building containing an internal courtyard. Asplund has added a wing, consisting mainly of a large hall, lit from the existing courtyard and from the roof. On the three outer sides of the hall are three levels of offices, approached by galleries round the hall. This interior is likely to be regarded as one of the best achievements of contemporary architecture. It is light and graceful in general form; its materials are simple, but their inherent design qualities are fully expressed; the details show the precision and simplicity which is typical of Swedish work.

The structure is of reinforced concrete ; the stanchions, approximating in form a rolled-steel section, are exposed and coloured blue and white ; triangular cantilevers support the roof. The walls are lined with light brown plywood carefully matched, and the lighter metalwork is stainless steel. A staircase ascends with very easy going, in one straight flight, to an attractive gallery overlooking the courtyard ; the stair and gallery serve as an approach and waiting space for civil marriage ceremonies to which they form an attractive setting. The stair balustrade consists of stainless-steel rods with a plain wooden capping running in long straight lines and easy curves. The whole side facing the courtyard consists entirely of a double window in large units against which, on the inside, are placed flowers and climbing plants arranged with great skill and taste.

The main floor is of Swedish green marble, straight jointed in one direction and random jointed in the other. The lift and its casing are of glass and painted steel tube, standing out in the open interior of the hall. A secondary stair in blue and white reinforced concrete ascends in one corner of the hall. This is supported on reinforced concrete columns, carrying a single stair string under the centre of each flight. The photographs of this building are by Mr. F. R. Yerbury [*Hon. A.*].

Above : The interior façade overlooking the old courtyard, a pool and fountain in the foreground

Below : Two views of the large hall in reinforced concrete, plywood, stainless steel and marble. The lift and telephone box are of plate glass and painted steel tube

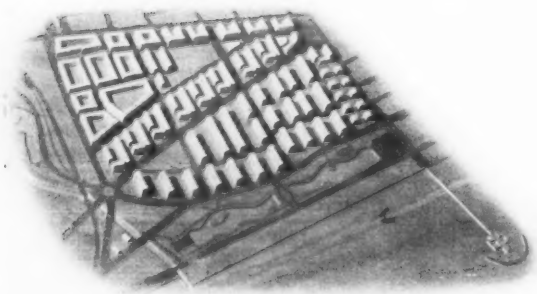


The first of twenty-four nine-floor blocks seen from the public gardens lying between the flats and the sea shore. The roof restaurant has magnificent views

THE RIBERSHUS AT MALMO

Architects : NILS ERIKSSON, D. HELLDEN & R. WELIN

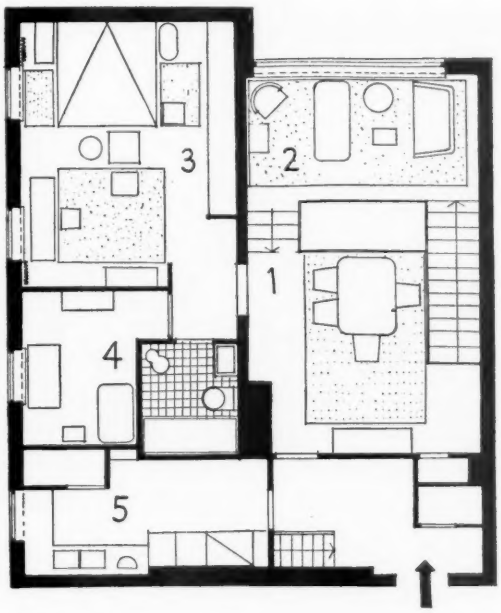
Engineer : DR. HJALMAR GRANHOLM



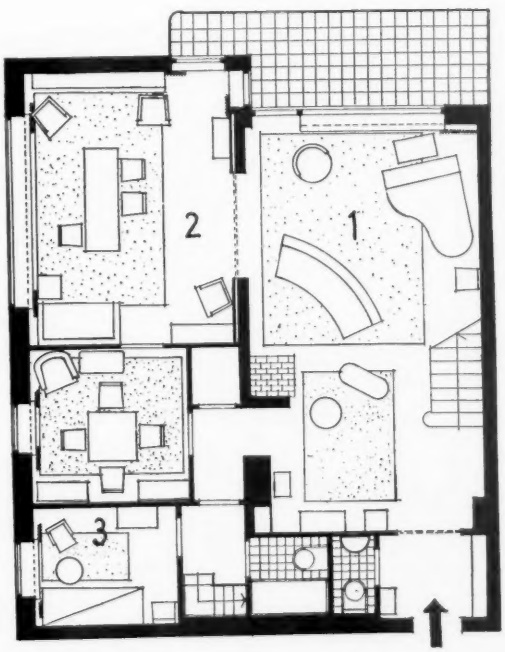
Model of the whole scheme, including some older flats with courtyard plans at the top left corner

This is a very large scheme of middle-class flats, built as a speculation, on the shores of the Sound. The enormous extent of the scheme is shown by the photograph of the model, which, however, includes some older flat blocks which can be distinguished by their now obsolete enclosed courtyard plans. Of the newer flats, only a group in the left-hand corner has so far been built. Of these newer flat blocks there are two types. One is four floors high, and has in part an echelon plan which is intended to give good views to the south-east. The other type is of nine floors with a basement for a garage and store-rooms. One block has a restaurant on the roof with a view across the Sound to Copenhagen opposite. Another contains a nursery school and a group of shops, the flat roof over the latter forming a protected playground for the school which is at first-floor level. The spaces between the flats are very wide, fully planted, and provided with children's play parks ; these are maintained by the owning company.

The tall flat blocks are remarkable for their novel interior planning. Each block contains a variety of sizes of flat and some maisonettes, all fitted together with great ingenuity, and no loss of efficiency. The plans of a typical maisonette, here reproduced, are worth study. On the lower level is a large living suite of three rooms and a balcony and also the maid's bedroom and lavatory. A main stair leads up to a wide landing with an enormous window overlooking the sea,



Upper Levels

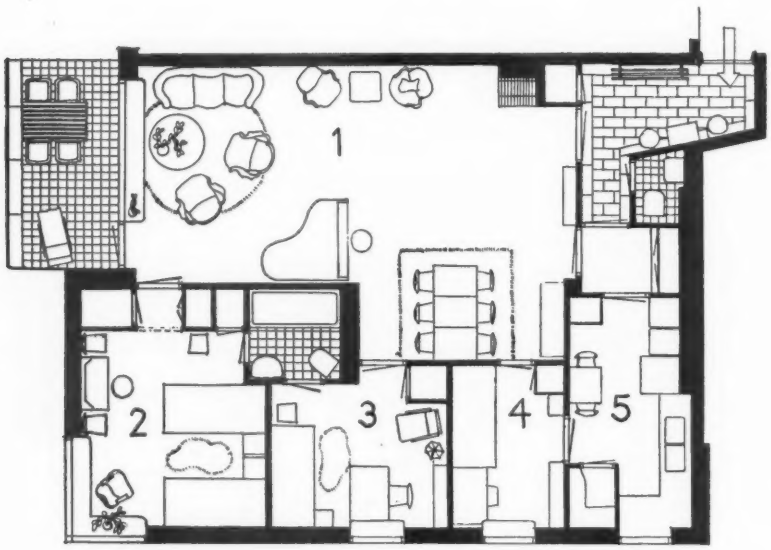


Lower Level

Key of Upper Levels : 1, Landing with Dining Table. 2, Lounge landing. 3, Large Bedroom. 4, Small Bedroom. 5, Kitchen

Key of Lower Level : 1, Open Lounge Hall, with fireplace, stair and balcony. 2, Study and Card Room. 3, Maid's Bedroom .

Plans and photograph of a maisonnette



Key : 1, Living Room. 2, Large Bedroom. 3, Small Bedroom. 4, Spare Bedroom or Maid's Room. 5, Kitchen

Plan of a typical flat of medium size. Central heating and controlled ventilation make open plans of this type comfortable

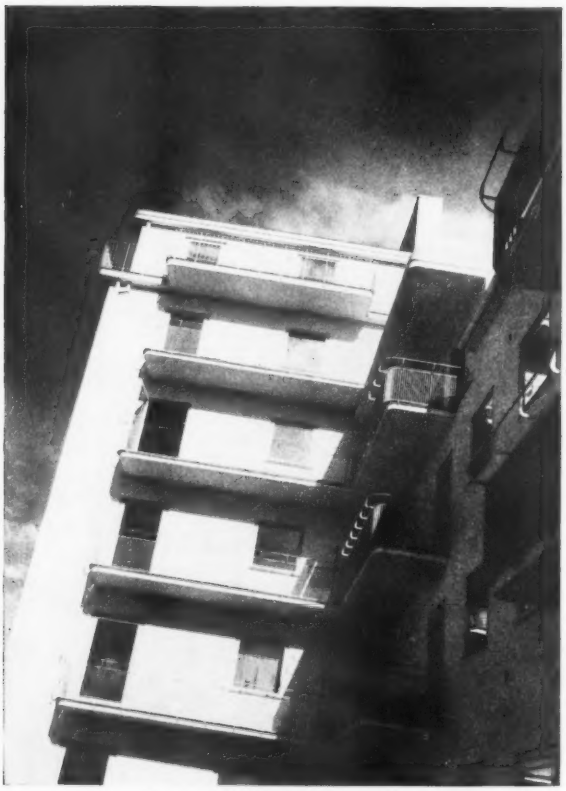
Typical lounge landing in a maisonnette. The balustrade is of coloured cord which can be renewed

Above and Right : A large flat for a small family, though Room 4 could be converted to a bedroom. The large uninterrupted windows and light decorations prevent the deep rooms from being dark

Below : A typical small flat

Key of Upper Plan : 1, Lounge Living Room. 2, Dining space up three steps. 3, Boudoir. 4, Study overlooking Lounge. 5, Kitchen. 6, Maid. 7, Bedroom

Key of Lower Plan : 1, Lounge Living Room. 2, Dining space. 3, Double Bedroom. 4, Child's Bedroom. 5, Kitchen



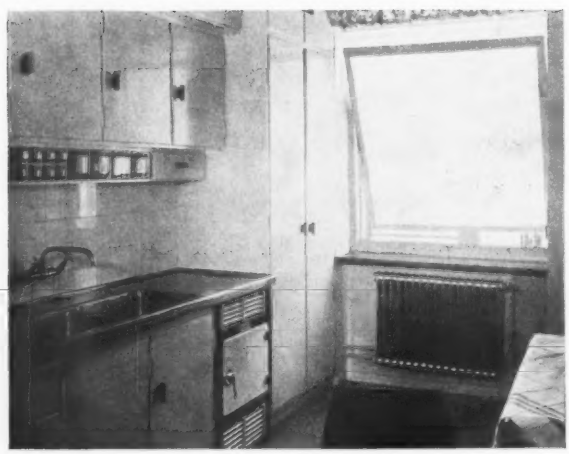
A corner of one of the nine-floor blocks

and continues up to an even wider upper landing, where the dining-table is placed. On this level are two bedrooms, bathroom, kitchen, a separate entrance to the lift hall and a narrow stair down to the maid's room. Other maisonettes of this type have more bedrooms and fewer living-rooms, so that all sizes of family and a wide range of incomes are accommodated in the same block.

Apart from the central heating, which is warmed from individual furnace units in each block, there is a single wood-burning fireplace in each flat. All services are internal, the sanitary apartments being individually lit and ventilated by flues to the roof; the natural draught of these flues, assisted by the warm air of the interiors, is said to give enough ventilation without fans.

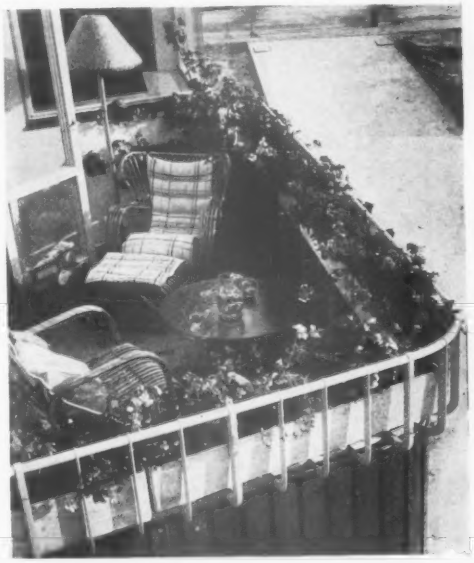
The structure is of reinforced concrete faced with brickwork, which is colourwashed. The windows are a new type called the "Perspective," described in the first article of this series. They consist of single sheets of glass without bars or mullions. The equipment is of very high standard, the kitchens being fully fitted, and with stainless steel sinks, draining boards and tables. There is ample cupboard space. All meters are fixed in a single room in the basement.

At the time these flats were visited, an exhibition of furniture had been arranged in several of them by the Swedish Association of Handicraft. The interior photographs show these exhibition-rooms and express current ideas on interior decoration. The success of the whole scheme has depended very much on the advanced outlook of the contractor-owner, E. S. Persson.

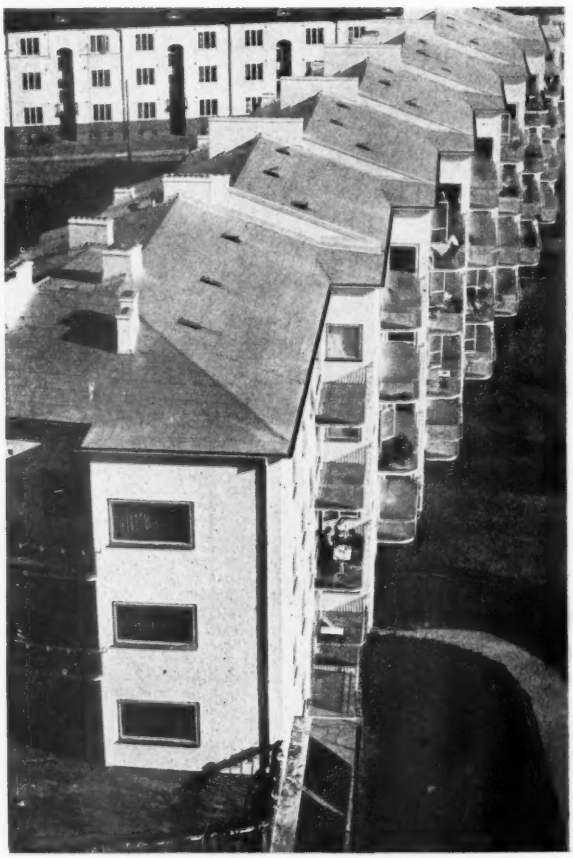


A typical kitchen, very elaborately fitted and equipped with stainless steel sink, draining board and table in one unit

Good design in balconies. They are wide enough for real use as open-air rooms. The flower boxes on the rails give both a garden effect and a sense of safety. No balcony is overlooked from a neighbour. The railings stand a little away from the floor slabs to allow snow to melt or be swept away. Asbestos cement is used for flower boxes and railing panels are of gaily painted sheet steel

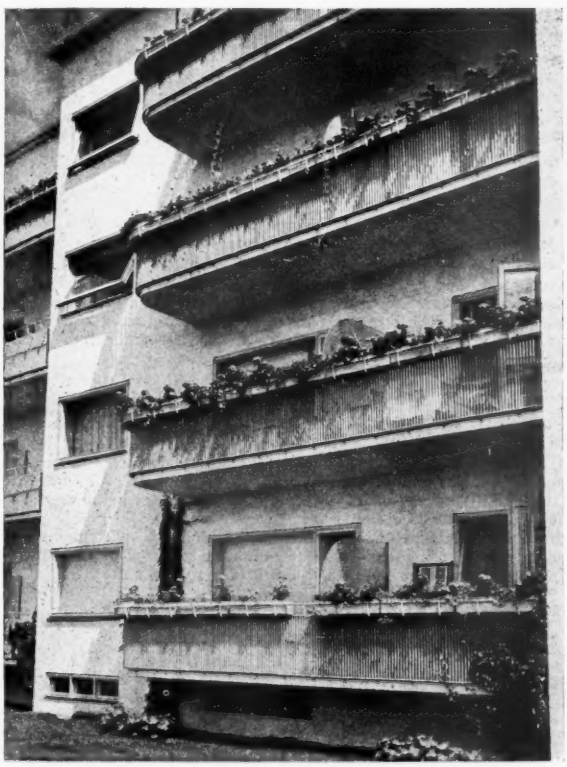


The first of the nine-floor blocks. There is a basement garage and good storage for tenants' cycles, prams, boxes, skis, etc.



One of the four-floor blocks, staggered to give more south-east sunshine and sea view to the living rooms

The main entrance to the whole scheme. On the left are shops of which the roofs serve as playground for the nursery school



A typical group of balconies and showing the special pivot-hung windows

THE INSTITUTE'S APPEAL

Members who are contemplating making an increased payment of subscription whereby the amount of the increase will be payable to the appeal fund are reminded that if they are prepared to enter into an agreement for the payment of such increased subscription for a period of seven years or more they will be entitled :—

(A) To deduct Income Tax at the standard rate from the amount by which the subscription is increased. Tax so deducted would be recoverable by the Institute on production of tax certificate signed by the Disponer and placed to the credit of the appeal fund in the name of the member.

(B) As an alternative, if the member entering into such an agreement does not desire to deduct the amount of Income Tax, the Institute would, on production of tax certificate signed by the Disponer, be able to recover Income Tax on the amount by which the subscription is increased made " gross," e.g., the gross amount of £5 5s. per annum when the standard rate of Income Tax is 5s. 6d. in the £ would be .. £7 4 10
Income tax at 5s. 6d. on £7 4s. 10d. .. 1 19 10

Net sum payable £5 5 0

In such a case the appeal fund will be credited with £7 4s. 10d. in the name of the member.

The amounts credited to the members in the appeal fund as defined above can be deducted by them in arriving at their income for sur-tax purposes.

The following are the forms of agreement recommended for use in cases of (A) or (B) as above defined. Separate copies can be obtained from the R.I.B.A. on application :—

FORMS OF AGREEMENT

A. *I,* (*Full Name*)
of (*Address*)
hereby covenant with the Royal Institute of British Architects that for a period of seven years from the (*see note 1*) *or during my life, whichever shall be the shorter, I will pay annually to the said Royal Institute a sum of £* (*see note 3*), *such sum to be paid from my general fund of taxed income, so that I shall receive no personal or private benefit in either of the said periods from the said sum of £ or any part thereof.*

In witness whereof I have hereunto set my hand and seal this day of 193 .

Signed, sealed and delivered by the said in the presence of :—
Signature
Address
Occupation *Seal.*

B. *I,* (*Full Name*)
of (*Address*)
hereby covenant with the Royal Institute of British Architects that for a period of seven years from the (*see note 1*) *or during my life, whichever shall be the shorter, I will pay annually to the said Royal Institute such a sum as will, after the deduction of Income Tax, leave in the hands of the Royal Institute a net sum of £* (*see note 3*), *such sum to be paid from my general fund of taxed income, so that I shall receive no personal or private benefit in either of the said periods from the said sum of £ or any part thereof.*

In witness whereof I have hereunto set my hand and seal this day of 193 .

Signed, sealed and delivered by the said in the presence of :—
Signature
Address
Occupation *Seal.*

NOTES

1. The date to be inserted should not be earlier than the date o execution of the agreement.

2. Only those subscribers who are liable to pay Income Tax at the standard rate should enter into these Deeds. Subscribers who obtain a rebate of tax (other than the statutory allowances), or who do not pay Income Tax, should not enter into these Deeds.

3. The sum to be inserted should be the additional subscription, and must not include the annual membership subscription.

4. The making of claims upon the Inland Revenue Department will be undertaken by the Institute.

5. The amount of the increase of the subscription, whether made under the above agreements or in accordance with the forms attached to the appeal of December 1938, will not be allowed as deductions from professional profits for Income Tax purposes ; and therefore deduction of tax under the agreements will have the effect of increasing the amount ultimately received by the Royal Institute without any additional cost to the subscriber.

DONATIONS FROM R.I.B.A. ALLIED SOCIETIES

Aberdeen Society of Architects .. 10 10 0

Norfolk and Norwich Association of Architects 50 0 0

The Norfolk and Norwich Association of Architects have also agreed to a reduction of the annual contribution under Byelaw 74 from one-third to one-quarter for a period of 10 years.

Royal Society of Ulster Architects 50 0 0

The Royal Society of Ulster Architects are also contributing 10 per cent. of the annual contribution under Byelaw 74 for a period of 5 years.

The following is the third list of donations and increased subscriptions received up to 28 January in response to the appeal issued to all members and honorary members and students on 16 December 1938

DONATIONS

	£	s.	d.
R. J. Angel [*F.*]	3	3	0
J. M. McClure Anderson [*A.*]		17	0
H. L. Anderson [*L.*]	10	10	0
Anonymous [*Student*]	2	2	0
Percy B. Arkcoll [*Student*]	1	1	0
William T. Benslyn [*F.*]	2	2	0
D. A. Beveridge [*F.*]	4	4	0
T. J. Beveridge [*L.*]	3	3	0
E. C. Bewlay [*F.*]	15	15	0
Sidney W. Birnage [*A.*]	1	1	0
A. G. Blackford [*A.*]		10	6
R. Steven Boag [*F.*]	2	2	0
John Brandon-Jones [*A.*]	5	5	0
C. Gustave Brault [*A.*]	1	8	0
Professor Cecil S. Burgess [*F.*]	6	6	0
R. W. Cave [*A.*]		10	6
John Challice [*A.*]	3	3	0
J. C. Charter [*A.*]	1	1	0
Maurice Chesterton [*F.*]	10	10	0
Sidney Clark [*A.*]	2	2	0
George E. Clay [*A.*]	2	2	0
G. Inglis Clay [*A.*]	1	1	0
C. D. Collins [*R.M.S.A.*]	5	5	0
J. B. Cooper [*A.*]	5	5	0
W. A. Cornell [*F.*]	2	0	0
John J. Cotten [*R.L.*]	1	1	0
H. W. Couchman [*A.*]	1	1	0
Paul P. Cret [*H.C.M.*]	10	0	0
Henry A. Crouch [*R.F.*]	5	5	0
T. Llewellyn Daniel [*A.*]	2	2	0
Denison H. Deare [*A.*]	3	3	0
Bernard Dicksee [*F.*]	5	0	0
Harold A. Dod [*F.*]	10	0	0
Arthur B. Drought [*Student*]		10	0
F. M. Dryden and J. E. Shaw [*F/L.*]	25	0	0
H. S. Fairhurst [*F.*]	10	10	0
P. G. Fairhurst [*A.*]	10	10	0
W. Keith Ferguson [*Student*]		10	6
James Fielding [*Student*]		5	0
H. St. C. Garrood [*L.*]	2	2	0
Ernest B. Glanfield [*F.*]	2	2	0
M. R. Golding [*Student*]	2	2	0
Professor Walter Gropius [*H.C.M.*]	2	0	0
Edwin Gunn [*F.*]	10	0	0
C. Hawkard [*Student*]		10	0
J. G. Henderson [*A.*]	3	3	0
Geo. H. Herring [*L.*]	1	1	0
E. C. Higman [*L.*]	1	1	0
T. H. Horsburgh [*A.*]	3	3	0
Fred. Howorth [*L.*]	10	0	0
Harry Hubbard [*A.*]	3	3	0
T. Harold Hughes [*F.*]	5	0	0
W. F. Johnson [*A.*]	2	10	0
Herbert Kinchington [*F.*]	3	3	0
Robert D. Kohn [*H.C.M.*]	10	0	0
L. Longbottom [*Student*]	1	1	0
Donald MacAlister [*Student*]	5	0	0
A. E. and A. M. McKewan [*AA.*]	10	10	0
Messrs. Master, Sathe & Bhuta [*F/AA.*]	3	3	0
Francis J. Mew [*Student*]	1	1	0
J. E. Middleton [*L.*]	1	1	0
Anthony Minoprio and H. G. C. Spencely [*AA.*]	5	5	0
A. H. Moberly [*F.*]	25	0	0
C. Ernest Monro [*A.*]	5	5	0
Charles S. Mordaunt [*L.*]	3	3	0
Percy Morris [*R.F.*]	2	2	0
W. R. Mosley [*L.*]	9	9	0
Spencer H. J. Murch [*A.*]	2	2	0
Keith D. P. Murray and C. S. White [*A/F.*]	8	8	0
Percy E. Nobbs [*F.*]	3	3	0
E. Berks Norris [*A.*]	3	3	0
H. J. Orchard [*A.*]	1	1	0
Lionel G. Pearson [*F.*]	15	15	0
Paul Phipps [*F.*]	1	0	0
Leonard Pickford [*A.*]	5	0	0
Charles Pike [*A.*]		7	0
Frederic Quy [*R.M.S.A.*]	3	3	0
Stanley C. Ramsey [*F.*]	5	5	0
Miss Mary F. Rigg [*A.*]	1	1	0
F. C. Robson [*L.*]	2	2	0
Arthur C. Russell [*L.*]	5	5	0
Robert Saddler [*Student*]	1	1	0
James Schofield [*A.*]	1	1	0
F. A. M. Selley [*Student*]	1	1	0
C. Herbert Smith [*L.*]	1	1	0
J. Smith [*Student*]		10	6
Chas. G. Soutar [*F.*]	10	0	0
A. Roland Taylor [*A.*]	1	1	0
R. A. Thomas [*F.*]	5	5	0
William J. Thrasher [*A.*]	2	2	0
Sidney F. Vine [*Student*]	1	1	0
Frank Wager [*F.*]	3	3	0
Douglas Webster [*Student*]	1	1	0
William Williamson [*F.*]	5	5	0
Jas. L. Worssell [*L.*]	2	2	0
Geo. R. Yeats [*Student*]		10	6
T. Yoxall [*A.*]	5	5	0
A. J. Zammit [*A.*]	3	3	0

SUBSCRIPTIONS

The following members and students have promised to increase their annual subscriptions or contributions by the amount and for the number of years inserted in brackets against the amount

	£	s.	d.	
Frank Abbey [*L.*]	2	2	0	(3)
V. R. Abbott [*A.*]		7	0	(10)
A. F. B. Anderson [*F.*] amount has been paid in advance	5	5	0	(3)
Robert Atkinson [*F.*] amount has been paid in advance	5	5	0	(3)
L. R. Barlow [*Student*]	10	0		(3)
W. J. Biggs [*Student*]	1	1	0	(3)
William Binney [*Student*]	1	1	0	(3)
Geoffrey O. Bromley [*Student*] a year until further notice	1	1	0	
R. Bush [*F.*] a year until further notice	2	2	0	
Harold A. Dod [*F.*]	2	0	0	(5)
F. Owen Eaton [*F.*]	3	3	0	(3)
L. Gordon Farquhar [*A.*] amount has been paid in advance	3	3	0	(3)
P. Fleetwood-Hesketh [*Student*]	1	1	0	(3)
J. H. Gask [*A.*]	1	1	0	(5)
A. M. Graham [*A.*] a year at his discretion	10	0		
Stanley Hamp [*F.*]	5	5	0	(3)
John S. D. Hicks [*L.*] a year until further notice	1	1	0	
W. H. Hobday [*F.*]	5	5	0	(3)
J. F. Howorth [*Student*]	10	0		(2)
S. J. H. Jackson [*A.*]	1	1	0	(5)
R. A. Kayll [*A.*]	3	3	0	(1)
Thos. W. Knight [*A.*] amount has been paid in advance	2	2	0	(3)
Arthur Lane [*Student*] a year until further notice	10	6		
William A. Lea [*F.*] amount has been paid in advance	2	2	0	(4)
Hubert Lidbetter [*F.*]	1	1	0	(11)
T. Alwyn Lloyd [*F.*]	3	10	0	(3)
Francis Lorne [*F.*] amount has been paid in advance	5	5	0	(3)
W. D. Lougher-Goodey [*A.*]	1	11	6	(2)
G. R. Lovell [*Student*] double subscription until further notice				
Lt.-Col. M. K. Matthews [*F.*]	2	12	6	(4)
Paul V. Mauger [*F.*]	5	5	0	(3)
Arthur J. May [*F.*]	5	5	0	(3)
C. H. N. Merrifield [*A.*]	2	2	0	(3)
C. W. Milburn [*A.*]	2	2	0	(3)
E. Brian O'Rorke [*A.*]	2	2	0	(5)
Wallace Paton [*F.*]	3	3	0	(3)
W. Stonehouse Payne [*A.*]	2	2	0	(3)
P. Kennerell Pope [*Student*]	1	1	0	(5)
Harry S. Robson [*A.*]	1	1	0	(3)
Emil C. Scherrer [*A.*]	1	1	0	(3)
E. W. B. Scott [*F.*]	5	5	0	(1) probably 3
Theo. G. Scott [*F.*]	5	5	0	(1) probably 3
Arthur Smethurst [*A.*]	1	1	0	(3)
J. Towneley Sugden [*L.*]		10	6	(6)
Thomas S. Tait [*F.*] amount has been paid in advance	5	5	0	(3)
C. S. M. Taylor [*A.*]	2	2	0	(3)
O. Weerasinghe [*A.*]	1	0	0	(3)
G. Westrup [*F.*] a year until further notice	1	1	0	
H. A. Noel Woodall [*L.*]		10	6	(20)
Alan Woods [*Student*] 50 per cent. increase on subscription for 3 years				
N. O. Wragge [*A.*]	1	1	0	(3)

The donations and increased subscriptions or contributions received and promised up to 28 January 1939 represent a total of £4,406 9s. 5d. This amount does not include increase of subscriptions or contributions promised for which no definite period is stated

Book Reviews

THE ROYAL PAVILION AT BRIGHTON*

By ANTONY DALE

Perhaps no building in England has given rise to more excitement and discussion, or aroused greater ridicule and disapproval, than the Royal Pavilion at Brighton. Condemned on account of the prodigious expenditure which it was said to have caused, the fantastic taste it was thought to represent, and the moral degeneracy it was accused of housing, it has had to wait until the twentieth century for a rational assessment of its artistic and historical merits. This disapproval was partly bound up with the unpopularity of George IV, whose very considerable deficiencies were magnified by the nineteenth century out of all recognition; but in a wider sense, too, the Pavilion was looked upon as symbolic of the debased culture of the Georgian era. Surprisingly enough, it does not figure in Thackeray's strictures of that age, but the most that Queen Victoria's Uncle Leopold, who knew it well, could say of it was that it was comfortable. Even Sydney Smith, who was by no means a Victorian, made it the subject of one of his least happy witicisms, and the attitude of a French visitor who went over the building in 1827 was fairly typical of the moderate opinion of contemporaries when he applied to it the remark coined about Versailles that it was a "favourite without merits," and added that it was regrettable that so much expenditure had not produced anything more than bizarre.

The twentieth century, with its appreciation of the eighteenth, has only recently rehabilitated George IV, and it is now the turn of the Pavilion. The task could not have fallen into better hands than those of Mr. Roberts. For many years director of the Pavilion estate, he has a greater practical and historical knowledge of the building than anyone now living, and has been responsible for its very judicious restoration in recent years. On his retirement he was requested by the Brighton Corporation to write the history of the Pavilion, and his book has been adopted by them as the official history of the building. It is more than unlikely that it will ever be superseded.

The accounts of the construction of the building are published for the first time, and show the legendary cost to have been exactly double the actual figure. The land cost £97,000, the buildings £259,000, with another £45,000 for internal decorations, and the furniture £101,000, making a total of £500,000 in all. Mr. Roberts threads his way with great clarity through the complicated stages of the growth of the palace; and what a muddle its development was! Throughout nearly 40 years building operations were in progress, but there was never any comprehensive plan embracing the whole estate. Strips of land were bought piecemeal, improvement succeeded improvement, and the whole was gradually renewed like the cells of the body, imperceptibly and from within. Nash himself recognised that this method proved more expensive than a total demolition and replacement, but it suited the Regent's continual desire for change.

As Prince of Wales he first visited Brighton in 1783. Three years later, after his fourth visit, his clerk of the kitchen, Louis Weltje, leased for him a "respectable farmhouse" on the Steine and sub-let it to the Prince. Weltje subsequently bought the house, but not till after his death in 1807 was the site acquired from his executors by the Prince, and even then it remained mortgaged to Weltje's brother for £17,000 for an uncertain number of years. Holland's original Pavilion, begun in 1786, lasted until 1801, when the Prince commissioned its enlargement. At the same time the first signs of a Chinese interior manifested themselves. This was apparently an entirely fortuitous development springing from the suggestion of Robinson, the clerk of the works, to convert one room into a Chinese gallery in order to make use of some Chinese wallpaper with which the Prince had been presented. The Prince told Lady Bessborough, however, that the choice of Chinese decoration was due to the popular reaction against French taste, but this seems an insufficient reason.

Holland was succeeded as architect in 1804 by William Porden, who designed the stables, now called the Dome. Mr. Roberts does not say whether he produced an Indian design for this of his own initiative, or was instructed to do so by the Prince. Presumably it was the former, but it had wider consequences than he could then have foreseen. The Prince soon desired to enlarge his house once more, and consulted Repton as to the style which would be suitable for it. Repton was then working at Sezincote and therefore full of oriental ideas. Moreover, he found the proximity of the new stables and Holland's classical building incongruous, and, it being impossible to shut out the view of the former with trees, he recommended the adoption of the Indian style for the whole scheme. The Prince was delighted with the idea, as the choice of an oriental design accorded excellently with his own dislike of simplicity. But though he praised Repton's plans unreservedly, for some unexplained reason, when the work was begun in 1815, it was Nash to whom the commission was given.

The building of the present Pavilion occupied the years from 1815 to 1822. But no sooner was it finished than George IV's visits to Brighton became less frequent. Mr.

**History of the Royal Pavilion, Brighton.* By Henry D. Roberts. 4to. xviii+224 pp.+96 plates. London: Country Life. 1939. 21s.

Roberts points out that he seems to have lost all interest in it as soon as it was completed. But the chief reason for his acquired preference for Windsor was the superior privacy which it afforded. The grounds at Brighton were small, the town had more than doubled in size since the days of his early visits when he enjoyed publicity, and the people were tiresomely inquisitive. This was not a new characteristic when it later drove Queen Victoria away, and William IV alone was impervious to it, since he enjoyed walking amongst a crowd and accosting complete strangers.

Mr. Roberts concentrates perhaps a little too closely on the purely structural history of the Pavilion, and does not tell us enough about life within its walls. How was it heated, for instance? Princess Lieven and others comment on the intense heat at which the rooms were kept, and this can hardly have been achieved by means only of two fireplaces in each room. Were braziers used, as at Versailles, or was some form of heating installed?

The book is superbly illustrated with photographs, mainly of furniture and fixtures removed by Queen Victoria and now in Buckingham Palace, but some of which have been returned by George V and Queen Mary at various times. In recent years a careful attempt has been made to restore the internal decoration of the Pavilion to its condition prior to the dismantling by Queen Victoria in 1847-50, and though it is not mentioned in Mr. Roberts' book, coupled with his own name in this regard should most certainly be that of Mr. W. Frost, the artist who has executed the actual work of restoration, and whose skill and discrimination is evident of itself to anyone who has known the Pavilion before and after the execution of these improvements in the last 10 to 15 years.

AN AMERICAN HISTORY OF THE GOTHIC REVIVAL

ROMANTICISM AND THE GOTHIC REVIVAL. *By Agnes Addison, 8vo. New York: Richard R. Smith. 1938. $2.50.*

This book, which depends for many of its facts on Eastlake and Kenneth Clark, the two most important books previously published on the Gothic revival, is of value because Eastlake is out of print and Clark is expensive. The title of this book fairly describes its content. It embraces some consideration of the literary antecedents and accompaniments of the Romantic revival in Europe; a reasonably full account of the Gothic revival in England and a brief sketch of the latter movement in France, Germany and the United States.

Europe, and especially England, occupy most of the pages. Ninety-six, to be exact. The book is written in plain, straightforward English. The story, in so far as it is told, is accurately narrated. It is an architectural tale fairly widely known to British architects for it treats of the diagrams of Batty Langley, Horace Walpole's adventure in building Strawberry Hill, James Wyatt and William Beckford's collaboration in erecting Fonthill Abbey, and continues with the Pugins (there appears to be an error on page 62, where the author implies that Augustus Pugin landed in "Ireland"), Sir G. G. Scott, Ruskin and William Morris. The main contributions of these individuals to the revival are reviewed by the writer, who explains (obviously for readers unfamiliar with their names and works) precisely who they were and what they did. It is possibly desirable to be thus explicit. The author has recently visited many of the buildings referred to in the text and these are freshly described as they appear to-day.

The remaining pages of the book deal with the revival in France, Germany and the United States. In these chapters there is some repetition introduced to explain the English origin of the movement in these countries.

Brief though they are, these pages are the most novel parts of the book. Still, though the author states that the examples of revived Gothic are more numerous in America than in England, she only devotes thirteen and a-half pages to this vast country. She might have said a great deal more and introduced Trollope's folly at Cincinnati, etc.

The work concludes with a glossary of definitions of words used to describe post-Renaissance Gothic.

Any reader who wants a concise account of this interesting phase of art will find it described and discussed in this book.

D. H.

STAGE DESIGN

DESIGNING FOR THE STAGE. *By Doris Zinkeisen. 4to. 78 pp. + 46 pl. London: Studio. 7s. 6d.*

This book treads new ground in that it does not set out to be an edition-de-luxe on the art of the theatre, but to explain the practical side of stage design to those without previous experience of work in the theatre. The first few chapters give a clear account of how a set is built and painted, and trace the evolution of a design from a rough sketch to the finished scene. The explanation is illustrated by good diagrams and photographs, showing different parts of a scene, ways of arranging succeeding scenes on the stage, model making and stage carpenters' working details.

So far, so good: but for the price of this book something more is required than a short technical handbook, and there follows a series of chapters on lighting, costume, shoes and wigs. Now there is very little that can be said about costume design, as distinct from clothes in general; clothes on the stage being real in a sense that scenery is not. There is no special technique for making them, only a few tricks to save expense. Therefore, it is extremely difficult to say anything about costume design in four or five pages. I think the author has been conscious of this difficulty, for she has done her best to reveal some useful generalities, such as the superior importance of line to ornament in period costume.

After having disposed of technical matters, some pages of plates, accompanied by comments, give an indication of the ends to be achieved. This is a much harder side of the subject. In grouping, characterisation, and arranging space in which the action of the play can move, the artist must work in intimate collaboration with the producer to present the author's conception to the eyes of the audience. Complete identification with the spirit of the play is more important than individual expression. It is here where the book should have provided most stimulation to the student that it falls rather flat. Either a more fundamental exposition of the designer's mental approach, or else a greater number of more varied illustrations, showing the work of artists of different styles, could have been given. With the notable exception of one set by Oliver Messel, and another by Berard, almost all the plates are taken from the author's own work, which is well known, and which, in spite of excellent qualities, is perhaps too personal an expression to be the most valuable exemplar in a book of this purpose. Examples might have been given, for example, of the work of Craig, Fraser or Picasso, whose stage designs would have been useful to show divergent methods of approach to a common excellence. Also some indications of the sources of material for scene and costume design would have had considerable value.

FRANK SCARLETT [*F.*]

Review of Periodicals

Attempt is made in this review to refer to the more important articles in all the journals received by the Library. None of the journals mentioned are in the Loan Library, but the Librarian will be pleased to give information about price and where each journal can be obtained. Members can have photostat copies of particular articles made at their own cost on application to the Librarian.

Normally the journals referred to in this review, all of which are in the R.I.B.A. reference library, cannot be borrowed. Members are, however, asked to encourage their local public libraries and their local society's library to take as many journals as they can afford; and they are asked, for the convenience of local members, to notify the R.I.B.A. of what journals are known to exist in public or private hands in their own neighbourhood.

SCHOOLS

ARCHITECTS' JOURNAL. *1939. 19 January. P. 109.*

ARCHITECT AND BUILDING NEWS. *1939. 20 January. P. 96.*
Chislehurst and Sidcup County School for Boys, by W. H. Robinson [*F.*] and J. W. Poltock; a four-form entry school for 600. The building is of reinforced concrete frame with brick infilling.

ARCHITECT AND BUILDING NEWS. *1939. 20 January. P. 109.*
St. Martin's School of Art and Technical Institute, London, by E. P. Wheeler [*F.*] and H. F. T. Cooper.

ARCHITECTURAL DESIGN AND CONSTRUCTION. *1939. January. P. 17.*
Reference section on educational buildings, giving technical data sheets and examples of recent nursery and infant, public, grammar, secondary and technical schools.

ARCHITECTURAL DESIGN AND CONSTRUCTION. *1939. January. P. 18.*
Luton Modern School for Boys. A secondary school for 500, by Marshall & Tweedy [*FF.*] and F. E. Moore.

HEATING AND VENTILATING ENGINEER. *1939. January. P. 296.*
Article on the warming and ventilating of schools, by L. J. Overton.

JOURNAL OF THE ROYAL VICTORIAN INSTITUTE OF ARCHITECTS (MELBOURNE). *1938. No. 4. P. 120.*
School of Music at Geelong Grammar School, by Buchan, Laird and Buchan.

JOURNAL OF THE INSTITUTE OF JAPANESE ARCHITECTS. *1938. December. P. 1313.*
Article on the design of primary schools at Osaka.

NUESTRA ARQUITECTURA (BUENOS AIRES). *1938. December. P. 426.*
Ralph Waldo Emerson School, California, by Richard Neutra.

BAUMEISTER (BERLIN). *1939. No. 1. P. 25.*
New buildings for a school near Lucerne, by Armin Meili.

BAUMEISTER (BERLIN). *1939. No. 1. P. 27.*
Senior school at Rottweil, by R. Kesseler and G. Graubner.

UNIVERSITIES

ARCHITECTS' JOURNAL. *1939. 19 January. P. 114.*
School of Anatomy, Cambridge, by Stanley Hall & Easton and Robertson [*FF.*].

MUSEUMS AND EXHIBITIONS

ARCHITEKTURA I BUDOWNICTWO (WARSAW). *1938. No. 9. P. 271.*
Large national museum and art gallery, Warsaw, by T. Tolwinski.

ARCHITETTURA (ROME). *1938. November. P. 655.*
Permanent Fascist exhibition building in Rome, by various architects.

ARKITEKT (ISTAMBUL). *1938. No. 9. P. 243.*
International Exhibition at Izmir, 1938.

BAUGILDE (BERLIN). *1939. No. 1. P. 7.*
Illustrated article by Von Friedrich Hossfeld on an exhibition of German architecture and art in Munich.

LIBRARIES

LIBRARY ASSOCIATION RECORD. *1939. January. P. 25.*
New library at East Finchley, by P. T. Harrison and C. M. Bond.

APXNTEKTYPA (MOSCOW). *1938. No. 12. P. 5.*
The Lenin Library, Moscow, by Schonko and Helfreich. One of the largest in the world, it is the only complete National library built since the war.

CIVIC

BYGGMÄSTAREN (STOCKHOLM). *1938. No. 39. P. 443.*
Fire and police station at Umea.

RESTAURANTS

APXNTEKTYPA (MOSCOW). *1938. No. 12. P. 39.*
Riverside landing stage and restaurant at Moscow, by Khiguer.

SHOPS

BYGGEKUNST (OSLO). *1938. No. 11. P. 213.*
Large drapery in Bergen, by Per Grieg.

INDUSTRIAL

ARCHITECTS' JOURNAL. *1939. 19 January. P. 122.*
Calverton Colliery scheme, Notts., by Jellicoe, Page and Wilson [*F.*], comprising pit-head buildings, 500 miners' cottages, and playing fields and social area.

ARCHITECTS' JOURNAL. *1939. 19 January. P. 126.*
Administrative, processing and manufacturing buildings for Messrs. Roche Products, manufacturing chemists, at Welwyn Garden City, by Professor O. R. Salvisberg and C. Stanley Brown. Reinforced concrete construction, with the exception of the manufacturing building, which is steel frame and brick infilling.

TRANSPORT AND BRIDGES

CONCRETE AND CONSTRUCTIONAL ENGINEERING. *1939. January.*
Number on reinforced concrete road bridges in Great Britain.

COMMUNITY BUILDINGS

APXNTEKTYPA (MOSCOW). *1938. No. 12 P. 49.*
Several hostels for skiers.

ARCHITETTURA (ROME). *1938. November. P. 667.*
Large seaside community building by Guaitoli, comprising dormitories, refectories and clubrooms.

HOSPITALS

ARCHITECT AND BUILDING NEWS. *1939. 27 January. P. 127.*

Harlow Wood Orthopædic Hospital, Nottingham, by Bromley, Cartwright & Waumsley [*F/L.*]. Established primarily for crippled children, it also admits a large number of adults. It has accommodation for 155 patients and 67 resident staff, and is planned on the pavilion system.

HOSPITAL AND NURSING HOME MANAGEMENT. *1939. January. P. 3.*

Manor House Hospital, Golders Green. New buildings, comprising ward block, operating theatre, mess rooms, laundry and boiler house, by Bethell and Swannell [*L/F.*].

ARKKITEHTI (HELSINGFORS). *1938. No. 11. PP. 161, 168.*

Layout scheme for a central hospital with 1,800 beds at Helsingfors, by Uno Ullberg, and details of the children's hospital unit in it.

ARKKITEHTI (HELSINGFORS). *1938. No. 11. P. 171.*

General hospital at Pori, on the Gulf of Bothnia, by Jussi Paatela. Providing for 230 patients, the buildings include accommodation for resident doctors and staff.

THEATRES—CINEMAS

L'ARCHITECTURE (PARIS). *1938. 15 December. P. 404.*

Experimental theatre at the 1937 Paris Exhibition, by M. P. Sonrel.

BYGGEKUNST (OSLO). *1938. No. 11. P. 213.*

Large office block and "Klingenberg" cinema at Oslo, by G. Blakstad and H. Munthe-Kaas.

RELIGIOUS

ARCHITECTS' JOURNAL. *1939. 19 January. P. 119.*

St. Chad's Church, Bolton. by R. Nickson.

HOUSES

ARCHITECT AND BUILDING NEWS. *1939. 27 January. P. 131.*

Small timber summerhouse on a magnificent wooded site in Fellowship Park, Los Angeles, by H. Hamilton Harris.

FLATS

ARCHITECT AND BUILDING NEWS. *1939. 20 January. P. 102.*

Four-storey working-class flats in Amsterdam, by Merkelbach, Karsten and Duiker. Reinforced concrete frame and brick infilling.

ARCHITEKTURA I BUDOWNICTWO (WARSAW). *1938. No. 8.*

Six new apartment buildings; one by Ostrowscy, three by Olsezewski, one by Zorawski, and one by Paradistal.

MATERIALS

IRON AND STEEL INDUSTRY. *1939. January. P. 236.*

Article on sheet steel for building purposes, dealing with dovetail sheeting.

ARCHITEKT S.I.A. (PRAGUE). *1938. No. 11-12. P. 180.*

Good illustrations and diagrams of the use of corrugated asbestos sheets.

CONSTRUCTION

STRUCTURAL ENGINEER. *1939. January. P. 42.*

Article on masonry construction, by S. B. Hamilton.

EQUIPMENT

NATIONAL BUILDER. *1939. January. P. 194.*

Sheets of construction details giving sizes and requirements in the planning of private bathrooms.

HOUSING

R.I.B.A. JOURNAL. *1939. 23 January. P. 293.*

Recent redevelopment of central areas in Liverpool. City Architect, L. H. Keay [*F.*]. Assistants responsible at Caryl Gardens and Warwick Gardens, W. Twiss [*L.*], and at Gilbert Street, L. C. Howitt [*A.*].

SHELTER (NEW YORK). *1938. November.*

Articles on "A year in the low-rent housing programme," by Catherine Bauer; "Labour and Housing," by W. V. Price; "Three Centuries of New York Slums," by H. Mayer and H. R. Mandel; "Paternalism in Public Housing," by A. Mallach; "What about Competitions," by Elizabeth Mock; and an open letter to Lewis Mumford apropos of his *Culture of Cities* by Corwin Willson.

SHELTER (NEW YORK). *1938. December.*

Table of expenditure and extent of one year's work under the 1937 United States Housing Act. Articles on "Housing in my time," by Edith Elmer Wood; "Life in a Greenbelt community," by Major J. O. Walker; and "Housing or Armaments," by Louis Alber.

DECORATION

ARCHITECTURAL REVIEW. *1939. January. P. 25.*

Living-room and bedroom in a Vienna flat, by K. Hofmann and F. Augenfeld.

ARCHITECT & BUILDING NEWS. *1938. 23 December. P. 334.*

New offices for Bakelite, Ltd., by O. P. Milne [*F.*]. The products of the firm have been extensively used in the internal structure and finishes.

A.R.P.

STRUCTURAL ENGINEER. *1939. January. P. 2.*

Article on air raids, structures and A.R.P. in Barcelona to-day, by Cyril Helsby. Very fully illustrated with photographs and diagrams showing the effects of aerial bombing and typical shelters.

BAUWELT (BERLIN). *1939. No. 4. P. 74.*

Article by Von K. Otto on A.R.P. in connection with garages.

TOWN AND COUNTRY PLANNING

CASABELLA (MILAN). *1939. No. 132. P. 2.*

Proposed town plan for the *Sempione-Fiera* district of Milan. Very well illustrated.

I'ARCHITTETURA ITALIANA (TURIN). *1938. December. P. 347.*

Drawings and photographs of the reconstruction of the *Via Roma* at Turin.

BAUWELT (BERLIN). *1939. No. 4. P. 68.*

Article by Dr. Frommhold on the military aspects of town planning, with particular reference to aerial warfare.

GENERAL

R.I.B.A. JOURNAL. *1939. 9 January. P. 217.*

Article on recent Swedish architecture.

ARCHITECT AND BUILDING NEWS. *1939. 13 January. P. 50.*

The Stockholm Building Club, by Sven Markelius. A five-floor building in which the fourth and fifth floors are used by the club, and the lower floors let as offices. The club premises comprise club-rooms, restaurant and assembly hall.

ARCHITECTURAL RECORD (NEW YORK). *1938. December. P. 43.*

The Agricultural Centre Building at Baton Rouge, by E. F. Neild. The arena, surrounded by stands and offices, is contained under a roof on rigid steel arches spanning approximately 219 ft., braced by truss-type cross frames.

Correspondence

THE COMPLETION OF THE R.I.B.A. LIBRARY CATALOGUE

The following letters have been received since the last number of the Journal

From MR. H. M. FLETCHER [*F.*]

Of all the undertakings to which the Institute has put its hand of recent years—and they are neither few nor light—there is none at which it can look with a juster pride than the library catalogue.

It is of use to every kind of architect, the practical, as a guide to the latest developments of scientific construction and planning, the scholarly, as a fountain of history and biography, the bibliophilous, as a revelation of the wealth of our library in rare and famous volumes, the artistic, as a treasure-house of descriptions and illustrations of the world's greatest buildings, and the real architect, who is the composite of all these categories. It combines the universality and accuracy of Whitaker with the romantic suggestiveness of Baedeker.

And it is uncommercial, so much so that without the generosity of Sir Banister Fletcher, it could not have been undertaken. This by itself should commend it in a sordid age.

From MR. PHILIP JAMES, Librarian, Victoria and Albert Museum

The R.I.B.A. is to be congratulated first on acquiring a benefactor to finance the printing of a catalogue so soon after the building of their new library, and secondly on the manner in which the catalogue has been produced. The first volume, or author catalogue, issued in 1937, reveals a great wealth of historical material of all periods as well as a profusion of modern text-books and treatises on architectural practices. The second volume, recently published, has a classified subject index supplemented with an alphabetical index. Together these two volumes make not only a practical working catalogue for those who use the library, but also an invaluable bibliographical tool for every reference library.

Now, it may be hoped, the R.I.B.A. will turn its attention to a catalogue of the Institute's great collection of architectural drawings.

From MR. S. ROWLAND PIERCE [*F.*]

May I offer the R.I.B.A. library and the various collaborators very hearty congratulations on the completion of a magnificent achievement. As a compilation it is magnificent—as a piece of typography it must be unequalled among library catalogues. For lowness of price it is almost phenomenal.

Those of us who do have recourse to the R.I.B.A. library for any type of research or reference owe a great debt of gratitude to both Sir Banister (Flight) Fletcher for his generosity and to the tremendous amount of hard work and thoroughness which has made this catalogue possible.

To those, and they must be many, who cannot always find the time to go often to the library the catalogue is invaluable. A quick reference will indicate the books available, and a few notes made in office or library will save the visitor to the R.I.B.A. shelves hours of time, and will, doubtless, relieve the staff of much detail work.

From COLONEL L. NEWCOMBE, Librarian, National Central Library

As you will, I am sure, realise, this catalogue will be of considerable value to us as a bibliography. It is a splendid piece of work, and you and all concerned in its production are to be congratulated and thanked for the provision of a valuable bibliography.

THE BUILDING INDUSTRY

7 Manor Place, Edinburgh, 3

To the Editor, JOURNAL R.I.B.A. *25.1.39*

DEAR SIR,—I have the disgraceful habit of only reading technical journals some time after they have been published. This letter may therefore be somewhat in the nature of a voice from the past, but I delighted in reading letters which you published following Mr. Roskill's address.

I had the good fortune in my early architectural life to work as a clerk of works—perhaps not an æsthetic occupation or what a "nice" architect would do. I submit, however, that such an experience, grovelling amongst bricks and bags of cement, measuring up stonework, examining lead-lined gutters, and swearing, in a friendly way, with foremen and technicians, all tends to give one a fuller vision of what is meant by the expression "æsthetic." What a grand vision it is when through one's set-square are not only seen drawings and details pinned on the board, but also, so to speak, the smell of the job. Its insulating materials; its electrical cables; its air inlets; and its workmen's tea.

With proper training the architect can perform the function of the fairy godmother who out of pumpkins, mice and lizards fabricated a beautiful golden coach for her client, Cinderella. Without proper training the architect will not have the ingenuity, understanding nor the æsthetic background to do anything with the pumpkin, mice and lizards other than make them perform and still look like those prosaic objects.

The idea that an architect nowadays is at the mercy of specialists and gets his fees through their work is surely one that is being looked at through the wrong end of the telescope. He is just as dependent as are all good leaders.

Swiftly returning to Cinderella, the architect with a sure and experienced background places the specialists (pumpkin, mice and lizards) in their proper relation one to another to ensure that when the transformation scene takes place (the final drawings on the architect's board) the resultant coach will have expressiveness of purpose, good proportion, dignity and, therefore, true architectural beauty. And remember the pumpkin, mice and lizards were all three absolutely necessary to achieve the final result and were perfectly functioning units complete in themselves before being harnessed to a bigger job—a building design by an architect.

Discounting the universal political and newspaper wave of war speculation, is the atmosphere of our modernly conducted seminaries a good one in which to breed an individual race of architects, still professional gentlemen, but able also to command the market which awaits them everywhere?

Yours very truly,

ALISTER MACDONALD [*F.*]

HOUSING IN PADDINGTON

The following memorandum on the refusal of the Paddington Borough Council to place responsibility for their Clarendon Street Housing Scheme in the hands of an architect was prepared by a committee of Paddington residents, all laymen.

It is obviously of enormous interest to architects to see one sector in their endless battle for recognition conducted so ably by laymen. Their argument is full of significance, and deserves our closest attention; particularly, perhaps, the sting in the last paragraph: "We do not only ask that an architect should be employed; we ask that a first-class architect with specialist experience of working-class housing should be employed."

MEMORANDUM ON THE REFUSAL OF THE PADDINGTON BOROUGH COUNCIL TO PLACE THE RESPONSIBILITY FOR THE CLARENDON STREET HOUSING SCHEME IN THE HANDS OF AN ARCHITECT

1. In February 1937 the Paddington Borough Council decided to replan and rebuild a large part of a famous slum, namely, the Clarendon Street area, under Section 34 of the 1936 Housing Act. It is to be one of the biggest schemes of its kind in London; over half a million pounds will be spent upon it, 14¾ acres will be covered; the site is near one of the main railway and road approaches to London; and it will affect some 4,000 working-class families.

2. On 22 July 1937 the Borough Council decided that it was not necessary to make an architect responsible for this working-class scheme, and it could be left to the Borough Engineer's department. There were at this date in the department two assistant architects, one of whom had not yet qualified; a year later there were three assistant architects. The designs and plans are signed by the Borough Engineer, and he alone is responsible for them. It has at no time been suggested that the responsible control should be placed in the hands of these architectural assistants, nor, indeed, that their experience is in any way commensurate with such a scheme; and, furthermore, it was admitted in reply to a question asked at the Borough Council meeting on 26 May 1938 that the architectural assistants had, in fact, no part in designing the initial User Plan (i.e., ground plan) which is now before the Minister of Health for consideration.

3. Evidently the borough councillors do not think it is worth while employing the best available specialist skill on working-class buildings. The working classes have much more at stake in these matters than the wealthy. The inexorable drive of poverty, and the consequences of slum clearance and overcrowding legislation, leave the worker small range of choice; their wives, whose houses are workshops as well as homes, are helpless to control their environment and must take what municipal authorities consider good enough. To a busy housewife, who is bearing and rearing children, defects of design are more than an irritation; they are often a tragedy.

4. It might be arguable that in the case, for instance, of a modest housing scheme in a small town a talented borough engineer would not do worse than an architect chosen at random. But the Paddington Borough Council cannot take refuge even in this doubtful argument, for in each of the three housing schemes already undertaken there are glaring mistakes judged from the point of view which is most relevant, namely, the degree to which they satisfy working-class needs.

The three schemes are Brindley House, Artesian House, Dudley House, the earliest dating from 1933. Such defects as the placing of larders on south walls, the position of taps and coppers which involve unnecessary lifting of buckets, the absence of lifts in high flats entailing the carrying of heavy weights, e.g., to a communal laundry on the top floor, the placing of balconies and staircases, the equipment for different kinds and uses of fuel, all are details which may appear to the layman trifling faults of design, but they make a sum total of daily irritation and exhaustion, and social workers have precise evidence that they are the cause of ill-health, especially during pregnancy, when the health of the next generation is at stake as well. When it is remembered, for instance, that scientific planning in a kitchen can result in a saving of 640 lbs. of weight-lifting per day, and a saving of a third of a mile in walking about the kitchen, it can be understood how important these small details can become. The evils resulting from larger and better-known defects of bad planning and design need no special mention here. The only comparison it is right to take in judging the existing buildings in Paddington is the standard set by the work of architects who are specialists in this branch of domestic architecture.

5. Assuming that the life of a building is a hundred years, we are now determining the living conditions of future working-class families for four generations to come. The results of bad planning mean ill-health; the burden of this is thrown back upon the public medical services, permanently offsetting the admirable work which is being done in that sphere.

6. The Clarendon Street area is insanitary, and the

houses dilapidated, but as can be seen from the photograph* there is some architectural merit in the layout of its streets and the design of its houses. It is a sociable sort of place where people can stand on their doorsteps and talk to their neighbours. It will take an architect of genius to give back to this important community in architectural form surroundings which will be as popular. Already there is much apprehension among those who live there as to what the new buildings will be like.

7. All available experience goes to show that the scheme will cost less, not more, if it is placed in the hands of an architect. His fees, calculated on a sliding-scale percentage basis, would include the provision of the office work, which would otherwise in any case have to be borne by the Borough Engineer's department. The amount which would have to be reckoned for the services of the architect himself may fairly be assessed at about £1,500 a year. On the assumption that this scheme would occupy him for four years, we are therefore arguing about a total sum of only some £6,000. And no one with experience in this field seriously doubts that far more than 1 per cent. of the total outlay would in fact be saved by the more efficient administration of the building contracts.

*Published with the memorandum in its original form

8. We regard it as essential that the architect shall be responsible for the scheme from the very beginning before any step may possibly be taken in the early stages which may fatally prejudice good layout or design. Fortunately, it is still possible to do this, as not only is the User Plan not yet passed by the Ministry of Health, but the whole scheme (for reasons unconnected with the issue we are considering) is in fact in abeyance for the moment. But this reprieve may end any day.

To sum up: We do not only ask that an architect should be employed; *we ask that a first-class architect with specialist experience of working-class housing should be employed.*

The interests of economy demand this. So does the welfare of London's working-class population.

So does the dignity and decency of one of the most prominent of London boroughs.

So does the reputation of our national housing policy, which successive Ministers of Health have left to the good sense and public spirit of local authorities to implement.

This matter is of tangible and urgent importance for the four generations of Paddington working-class families who are involved. And if the Borough Council persists in its obscurantism it will give a grievous setback to a cause in which this country is already all too backward.

Obituaries

WALTER CAVE [*Ret. F.*]

Mr. Walter Cave [*Ret. F.*], who died on 7 January, aged 75, after a short illness, was Vice-President of the R.I.B.A. from 1917 to 1921; he had served for many years on the Council and the Board of Architectural Education. Mr. Cave's practice was general in character, and included buildings of a great range of kinds; probably the best known is the Aeolian Hall, New Bond Street; other prominent London buildings were Messrs. Burberry's in the Haymarket; Messrs. Chappell's Galleries in New Bond Street; Messrs. Bechstein's in Wigmore Street; the entrance to the Adelphi Theatre. Elsewhere buildings of importance are an extension to Somerville College, Oxford; the Church of the Nativity, Watlington; Sidmouth Cottage Hospital; houses by him are Ewelme Down, Oxfordshire; Littlecourt, Northants; The Wharf, Sutton Courtenay; and Bengeo House, Herts.

For many years Mr. Cave was surveyor to the Gunter estate, covering a large part of South Kensington, and in this capacity he was responsible for the laying-out and designing of a large estate near North End Road, Fulham, which was an early experiment in controlling the speculative builder. Mr. Cave was also consulting architect to the Whiteley Trust, which was a bequest by William Whiteley, the shopowner, for the erection of cottage homes near Esher.

Mr. Cave was the son of Sir Charles Daniel Cave, of Sidbury Manor, Sidmouth, and Edith Harriet, daughter of John Addington Symonds. He was educated at Eton, and gained repute there as an athlete, winning the 100 yards and playing in the cricket and football XI's for three years. In 1883 he played cricket for Gloucestershire.

His professional training was obtained in Sir Arthur Blomfield's office and in the Royal Academy School. He travelled extensively abroad before starting his own practice in 1889. Mr. Cave gave up his practice in 1935, and it has not been continued.

L. L. POWELL [*F.*]

We regret to record the death in Brisbane on 29 October of Mr. Langé Leopold Powell. He was born in 1886, and was articled to Mr. G. H. M. Addison and later worked in offices in London. He began to practise in 1912 in Brisbane, and remained there all his life. He practised first as Chambers & Powell, then as Powell & Hutton; 1927-31 as Atkinson, Powell & Conrad; 1931-33, Powell & Rae; since 1933 by himself. Among his buildings are St. Martin's Hospital and the Masonic Temple, Brisbane; various offices, factories and warehouses in and around Brisbane; a number of churches and country banks; and, in conjunction with Messrs. Atkinson and Conrad, the rebuilding of Brisbane General Hospital. He was also joint architect with them to the South Coast Hospitals Board.

Mr. Powell was secretary and later president of the Queensland Institute of Architects; he was at one time also President of the Council of the Federal Institute of Architects, and later president of the Royal Australian Institute of Architects.

The practice is being carried on by Messrs. R. E. Dods and S. T. Thorpe, A.R.A.I.A., under the title of Langé L. Powell, Dods & Thorpe, at Commercial Bank Chambers, Queen Street, Brisbane.

C. E. BLACKBOURN [*Ret. F.*]

We regret to record the death, on 31 December, of Mr. Charles Edwin Blackbourn. He was born in 1867 and received his training in the office of the Surveyor of Norwich Cathedral. From 1905 to 1926 he was a member of the staff of Messrs. Lovegrove & Papworth, Old Street; he then entered into partnership with Mr. J. Barrington Baker [*A.*], Finsbury Square, who is continuing the practice at the same address.

Mr. Blackbourn was responsible for the building of several schools for Tottenham Education Committee; several Masonic halls and Oddfellows halls; and a large extension to the Prince of Wales General Hospital, N.15. For many years he was surveyor to the Paddington Bench of Licensing Justices.

ALEXANDER McGIBBON [*Ret. A.*]

We regret to record the death, which took place recently, of Mr. Alexander McGibbon. He was born in 1861 and was trained at the Glasgow School of Art and in the office of Mr. Harry Blair, and later worked in the offices of several firms in Scotland. In 1890 he began to practise on his own account. Mr. McGibbon was the architect for the Brown Institute at Renfrew, and was at one time director of the architectural department of the Glasgow School of Art. He made measured drawings of Glasgow and other English and Scottish cathedrals and published notes on them.

Notes

ADMIRALTY ARCHITECTURAL APPOINTMENTS OPEN

(1) Civil Engineering Assistants (Temporary); and (2) Architectural Assistants (Temporary) required for Drawing Office duties at the Admiralty and at H.M. Dockyards.

Candidates for Engineering Appointments should have had experience in the design of structures in steel or reinforced concrete, or in some other branch of civil engineering works.

Salaries £4 to £8 per week at the Admiralty and £4 to £7 at the Dockyards, according to qualifications.

Applications, stating age, giving full particulars of qualifications, experience, and enclosing copies of testimonials, to be addressed to the Civil Engineer-in-Chief, Admiralty, S.W.1.

Envelopes and applications to be clearly marked in top left-hand corner either (1) Engineering Assistant Jan., or (2) Architectural Assistant Jan.

APPOINTMENT OF ARCHITECTURAL ASSISTANT

BOROUGH OF PENZANCE

Applications are invited for the appointment of an Architectural Assistant at a salary of £300 per annum, rising by annual increments of £15 to a maximum of £360 per annum, subject to satisfactory service.

Applicants should be Associate Members of the R.I.B.A. or hold equivalent qualification, and be experienced in architectural design, preparation of working drawings, details, specifications estimates and supervision of new and maintenance work in connection with public buildings, schools and housing estates.

The appointment will be determinable by one month's notice on either side and the successful candidate will be required to pass a medical examination. Applicant's age should not exceed 35 years.

Applications, together with copies of three recent testimonials, on the official form to be obtained from Mr. R. C. E. Austin, Town Clerk, Municipal Buildings, Penzance, must be delivered in plain sealed envelopes, endorsed "Architectural Assistant," not later than Monday, 13 February, 1939. Canvassing, either directly or indirectly, will be deemed a disqualification.

L.C.C. PLANNING SCHEMES: COMMENTS WANTED FROM ARCHITECTS

L.C.C. DRAFT PLANNING SCHEME FOR AREA IV (SOUTH-WEST), COMPRISING THE METROPOLITAN BOROUGHS OF BATTERSEA AND WANDSWORTH

The Town Planning, Housing and Slum Clearance Committee of the Royal Institute wish to draw the attention of members to a copy of the above L.C.C. Draft Planning Scheme which has been deposited in the Reference Library for inspection, together with copies of two accompanying maps.

The Committee would be pleased to receive comments or suggestions on the scheme, as it is hoped to arrange an interview on the matter with representatives of the London County Council as soon as possible.

Correspondence should be addressed to Mr. T. S. Barnes, Joint Hon. Secretary, Town Planning, Housing and Slum Clearance Committee, R.I.B.A., 66 Portland Place, W.1.

SIR BANISTER FLETCHER

On 14 January the Indian Institute of Architects arranged a meeting in Bombay for Sir Banister Fletcher, who is at present on holiday in India.

UNIVERSITY COLLEGE LONDON LECTURES

The following lectures of interest to architects have been arranged by University College, London. They are open to the public without fee or ticket.

Wednesday, 15 February, 7.30 p.m.—"Building in the Countryside—Good and Bad." By Mr. J. H. Arkell, Assistant Secretary, Council for the Preservation of Rural England. (Lantern illustrations.)

Wednesday, 22 February, 7.30 p.m.—"Landscape Design." By Mr. G. A. Jellicoe [*F.*]. (Lantern illustrations.)

Wednesday, 1 March, 7.30 p.m.—"The Case for Mixed Develop-

ment in Large-Scale Rehousing. By Mr. Eugen C. Kaufmann. (Lantern illustrations.)

Wednesday, 8 March, 7.30 p.m.—" Slum Clearance." By Dr. Maitland Radford, Medical Officer of Health, St. Pancras. (Lantern illustrations.)

FINAL AND SPECIAL FINAL EXAMINATIONS

The R.I.B.A. Examination Board in India have arranged to hold the R.I.B.A. Final and Special Final Examinations in Bombay from 14 April to 22 April 1939. The last day for receiving applications, which should be sent to the Hon. Secretary of the R.I.B.A. Examination Board in India, " Gustad Chambers," Sir Pherozeshaw Mehta Road, Fort, Bombay, is 14 March.

GEORGE WITTET MEMORIAL FUND
1939

The Wittet Memorial Scholarship of Rs. 1,000 will be awarded in the month of June (subject to the following conditions) to a holder of the Government of Bombay Diploma in architecture who has not previously held the Scholarship who submits the best selection of drawings comprising (*a*) four double-elephant mounted sheets of a building or buildings of architectural interest measured and rendered by the competitor, and (*b*) four double-elephant mounted sheets of working drawings of a building or buildings designed and drawn by the competitor.

Drawings with the full name of the competitor should be sent to reach the Official Trustee of Bombay at his office in the Old Custom House Yard, Fort, Bombay, not later than 31 May.

ALLIED SOCIETIES' ACTIVITIES

The Annual General Meeting of the **Royal Institute of the Architects of Ireland** was held in Dublin on 15 December 1938, Mr. J. J. Robinson, M.Arch., President, in the chair.

The officers for 1939 were announced as follows : Messrs. J. J. Robinson, M.Arch. (President) ; Eoghan D. Buckley (Hon. Secretary) ; Stephen S. Kelly (Hon. Treasurer).

The annual report of the Council was read by the Hon. Secretary and was adopted unanimously. It recorded a very satisfactory and extensive year's work, involving nine Special Council Meetings and two Special General Meetings in addition to eight ordinary Council Meetings and four Statutory General Meetings.

Among other matters referred to in the Report was the death of the late Mr. R. Caulfeild Orpen, Past President of the Institute, to whom a high tribute was paid for his fine qualities as an architect and as a man, and emphasis was laid on the severe loss suffered by the profession in his passing.

The necessity for increased accommodation for the activities of the Institute was felt, and a competition is to be held amongst members for a design for a new hall at the rear of the Institute premises.

Conditions amplifying the existing regulations governing the promotion of Architectural Competitions were framed during the year and adopted. The Council strongly recommended the promotion of architectural competitions for buildings of an important nature, and a special Competitions Committee has been set up and held some meetings during the past year.

The Joint Town Planning Committee met during the year and amendments and suggestions as to improvements in the Town and Regional Planning (Amendment) Bill were agreed upon and submitted to the Department of Local Government and Public Health.

The outstanding event of the coming year's activities will be the functions to celebrate the Centenary of the Institute, which was founded on 1 October 1839. The R.I.B.A. have accepted the invitation to hold their Annual Conference in Dublin in conjunction with the Centenary celebrations, which will take place from the 21st to the 24th of June next. Detailed programme will be announced in the near future.

Two successful annual dinners have been held lately, one in Edinburgh, the other in Nottingham. At the dinner of the **Edinburgh Architectural Association,** at which Mr. J. R. M'Kay [*F.*] President, presided over a large company, Sir John Watson, K.C., proposed the toast of " Architecture." He suggested that it might be the architect's job to recapture for Scotland her lost sense of being a nation. Nineteenth century material prosperity had produced a Scotland that for sheer brutality and blatant vulgarity left the worst structures of industrialism in the rest of the world beggars. To-day the harm done by slum surroundings was being swept away by better housing—though some of it was indifferent, or even bad—and rehoused people were gradually finding a higher standard of decency. Sir John went on to say that London, since it must be evacuated in the face of an enemy, could no longer be a capital. That would mean a redistribution and a demobilisation of London from being a cosmopolitan centre with a " yes-man " outlook to being a decent Cockney town with a decent Cockney tradition. Architects to-day had a God-given chance to help plan this redistribution. Mr. H. S. Goodhart-Rendel, President, replied. Mr. J. Wilson Paterson [*A.*] proposed the toast of " The City of Edinburgh," to which Lord Provost Henry Steele replied, and Mr. Leslie Grahame-Thomson [*F.*] proposed the toast of " The Guests," to which Sir Ian MacAlister, Secretary, R.I.B.A., replied.

The dinner of the **Nottingham, Derby and Lincoln Architectural Society** was held on 20 January at the Black Boy Hotel, Nottingham. Mr. A. E. Eberlin [*A.*], Vice-President presided in the absence of Mr. W. G. Watkins, and there was a large number of distinguished local officials present. Among other speeches made, Mr. L. H. Gluckstein, M.P., proposed the toast of " The R.I.B.A. and Allied Societies." He said that architecture played an important part in national life, and the profession, possibly more than any other, had a vitally formative influence on public manners and habits. Recent advance in the standard of life in England had been largely brought about by the skill and ingenuity of architects. Mr. H. S. Goodhart-Rendel, President, in his reply, referred to the Architects' Registration Bill, and suggested that one day it might be possible to enact that local authorities could only consider plans presented by architects.

A number of interesting lectures have been delivered lately. The **Sheffield, South Yorkshire and District Society of Architects and Surveyors** had a lecture on 12 January from Mr. J. P. Rhys, F.S.I., A.M.T.P.I., on Current Problems in Planning and Road Development. The **Birmingham and Five Counties Architectural Association** had a lecture on 13 January from Mr. O. P. Milne [*F.*] on Fashions and Tendencies in Architecture, and another on 25 January from Mr. E. A. A. Rowse [*A.*] of the School of Planning and Research for National Development. Mr. Rowse reviewed those conditions in our physical environment, which have brought about the city of to-day, with its limiting and hostile influences on the optimum development of the human being ; and then passed to the chief changes which were taking place in society at the moment, which must materially alter our physical environment, developed in most civilised countries during the last century and a half. He assumed that man's ultimate objective was to achieve control of his environment, but to overcome the complexity of the problems he has to face, a new collaborative faculty, giving rise to what may be termed the " collective brain," must be developed. Since world population was tending, with increasing rapidity, to urbanisation, the planning of a city would be the chief problem of environmental control to which such a " collective brain " would give itself. Mr. Rowse concluded his lecture by a discussion of the principle underlying the planning of cities of the future.

PROBATIONERS

The following were enrolled as Probationers of the Royal Institute during the month of December 1938 :—

Allan, Kenneth Roy, *London*. Baker, Kenneth Frederick, *Maidstone*. Barnes, Ronald Sidney, *London*. Barnsley, Frank Bernard, *Birmingham*. Bedford, Peter Francis, *Sheffield*. Belfer, Sidney Lionel, *London*. Benslyn, Arthur William Key, *Birmingham*. Bowden, Douglas Hugh, *Brooklands, Cheshire*. Bradley, Stanley, *Bingley, Yorks*. Bridger, Kenneth Arthur, *Kingston-on-Thames*. Brooks, Reginald, *Liverpool*. Brown, William George, *Turriff, Aberdeenshire*. Bryan, John Leslie, *Leicester*. Cameron, James Blair, *Edinburgh*. Cameron, James Buntin, *Paisley*. Carlton, Keith Howard, *Maidenhead*. Caro, Rachel Alice, *Churt, Surrey*. Cheesman, John Ernest, *Penge*. Clarke, Edward Anthony, *Cirencester*. Clarke, William James, *Dundee*. Clesly, Peter William, *Bournemouth*. Cohen, John Slaney, *London*. Cole-Evans, Gwynedd Alafon, *Chelmsford*. Combes, Richard Anthony Lee, *Bournemouth*. Cook, Geoffrey John Allen, *Guildford*. Counter, Raymond Victor, *Bournemouth*. Crossley, Alan, *Stockport*. Dale, Denis Gordon, *Sowerby Bridge, Yorks*. Dalgliesh, George, *Inverness*. Day, Alan Charles, *London*. Dines, Kenneth George, *Hounslow, Middlesex*. Donaldson, Frank Kenneth, *Hull*. Dowell, Norman Charles, *Leicester*. Dunnill, Robert Godfrey, *Hertford*. Eastwick-Field, John Charles, *Cranleigh, Surrey*. Edridge, John, *Upper Warlingham*. Evans, David Henry Samuel, *Aberystwyth*. Fillingham, John Francis, *Hull*. Flinder, Alexander, *London*. Fox, Alfred Scott, *Wormit, Fife*. Garland, Robert, *Helston*. Geeraerts, Arthur Albert, *London*. Gregory, Edward Francis, *Leicester*. Grey, Ernest William, *Scarborough*. Guy, William, *Pontefract, Yorks*. Harrison, Ronald Harvey, *Droitwich, Worcs*. Hoare, Leslie Cyril Edward, *Newton Abbot*. Huggett, Bernard William, *London*. Hughes, James Quentin, *Liverpool*. Hunneyball, Douglas Thomas, *Hertford*. Hunt, Bert Raymond, *Sunderland*. Jackson, Arthur Hepworth, *Hull*. Jupp, Geoffrey Arthur, *Addiscombe, Surrey*. Kneale, Andrew Wilson, *Bramhall, Cheshire*. Levine, Samson, *London*. Lindsay, George Nicoll, *Wormit-on-Tay, Scotland*. MacCann, John Patrick, *Clones, Co. Monaghan*. MacDonald, Calum, *Edinburgh*. Mack, George Robert Ashworth, *Louth, Lincs*. Manahan, John Gerard, *Dublin*. May, William Jack, *London*. Mellor, Alexander John, *Bournemouth*. Minto, James Christopher, *Romford*. Mumford, John *London*. Napier, John Augustus, *Cardiff*. Newson, Exeter Robert, *Stowmarket, Suffolk*. Norman, Hilda Muriel, *Sunderland*. Packer, Denis Clifford, *Westcliff-on-Sea, Essex*. Page, Derek Edward, *Aylesbury, Bucks*. Partington, James Ernest, *Bolton*. Partington, Richard Scott, *Bolton*. Peck, Stewart Faulkner, *London*. Porritt, Hubert Harold, *Darlington*. Pratt, Alan Leslie Hampden, *Newcastle-upon-Tyne*. Price, Barbara Mary, *London*. Price, Walter Frederick, *Swansea*. Read, Harold John, *Southall, Middlesex*. Richards, Leonard John, *Barry*, Rushton, Roy Frederic, *London*. Shadforth, Gordon, *Lancaster*. Spaven, Thomas Riddell, *Edinburgh*. Spurr, Roland Dawson, *Batley*. Sykes, Leslie Ernest, *Manchester*. Taylor, Kenneth Royle, *Manchester*. Thompson, Arthur Desmond Hunter, *Dunfanaghy, Co. Donegal*. Thompson, David Arthur, *Shaw, Lancs*. Todd, George Lyon Walker, *Edinburgh*. Todd, Paul Loftie, *Edinburgh*. Toogood, Geoffrey Roger, *Croydon*. Vass, Claude Roland, *Farnborough, Hants*. Versino, Andrea George, *Coulsdon*. Vulliamy, John Sebastian Papendick, *London*. Ward, Cecil, *Worthing*. Wilkins, Howard Frederick Osborne, *Bournemouth*. Willson, Thomas Francis, *London*. Winder, Norman Henry Duncan, *Liverpool*. Woodford, Eric Raymond Reginald, *Worthing*. Wren, Eric Henry, *Wolverhampton*.

Notices

SEVENTH GENERAL MEETING

MONDAY, 20 FEBRUARY 1939, AT 8 P.M.

The Seventh General Meeting of the Session 1938-39 will be held on Monday, 20 February 1939, at 8 p.m., for the following purposes :—

To read the minutes of the Sixth General Meeting held on Monday, 6 February 1939 ; formally to admit new members attending for the first time since their election.

Mr. John N. Summerson, B.A.Arch.(Lond.) [*A.*], to read a paper on "The Great Landowner's Contribution to the Architecture of London."

Advance copies of the paper may be obtained by members hoping to take part in the discussion on application to the Secretary R.I.B.A.

R.I.B.A. CAMERA CLUB

The Camera Club are holding their annual exhibition at the R.I.B.A. from 3 February to 10 February 1939.

The exhibition will be open between the hours of 10 a.m. and 8 p.m., except on Friday, 10 February, when the exhibition will close at 5 p.m.

R.I.B.A. ANNUAL DINNER 1939

The Annual Dinner will take place on Friday, 10 February 1939, at 7 for 7.30 p.m. in the R.I.B.A. Henry Florence Hall, 66 Portland Place, W.1. Full particulars were contained in the circular letter to members enclosed with the JOURNAL for 5 December. A number of tickets are still available and will be allotted in order of application. Applications for tickets, which must be accompanied by cheques or postal orders, should be sent to the Secretary R.I.B.A. *by return of post.*

EXHIBITION ON "ROAD ARCHITECTURE : THE NEED FOR A PLAN"

1 TO 30 MARCH 1939

The exhibition entitled "Road Architecture : The Need for a Plan" will be opened at 3 p.m. on Wednesday, 1 March 1939, by the Rt. Hon. Herbert Morrison, P.C., M.P.

All members of the R.I.B.A. are cordially invited to attend the opening. (No tickets are required. See leaflet enclosed with this issue of the JOURNAL.)

The exhibition will be open to the public on 1 March from 5 p.m. to 8 p.m. Subsequently it will be open on weekdays from 10 a.m. to 8 p.m., Saturdays 10 a.m. to 5 p.m.

In conjunction with the exhibition a new documentary film, "Roads Across Britain," will be shown on most days at 3 p.m., 4.30 p.m., 6.30 p.m. and 7.15 p.m.

BRITISH ARCHITECTS CONFERENCE, DUBLIN, 21-24 JUNE 1939

The Annual Conference this year of the Royal Institute of British Architects and its Allied and Associated Societies will be held in conjunction with the Centenary Celebration of the Royal Institute of the Architects of Ireland and will take place at Dublin from 21 to 24 June 1939.

The Royal Institute of the Architects of Ireland have in hand the preparation of a most attractive programme and particulars will be issued in due course.

All members and students of the R.I.B.A., and all members and students of the Architectural Association and the Allied Societies, are cordially invited to attend the conference.

ROYAL INCORPORATION OF ARCHITECTS IN SCOTLAND ANNUAL CONVENTION 1939

The Annual Convention of the Royal Incorporation of Architects in Scotland will be held within the area of the Edinburgh Architectural Association on Friday and Saturday, 2 and 3 June 1939, at Peebles.

LICENTIATES AND THE FELLOWSHIP

By a resolution of the Council passed on 4 April 1938, on and after 1 January 1939 all candidates whose work is approved will be required to sit for the examination, which will be the design portion of the Special Final Examination, and no candidates will be exempted from the examination.

NOTE.—The above resolution will not affect Licentiates of over 60 years of age applying under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 3 April 1939 (overseas candidates 19 June) they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 11 February 1939.

THE RECEPTION OF NEW MEMBERS AT GENERAL MEETINGS

The procedure for the introduction and reception of new members at General Meetings is now as follows. New members will be asked to notify the Secretary beforehand of the date of the General Meeting at which they desire to be introduced and a printed postcard will be sent to each newly elected member for this purpose. They will be asked to take their seats on arrival in a special row of seats reserved and marked for them. At the beginning of the meeting, on the invitation being given to present themselves for formal admission, each new member will be led up to the Chairman by one supporter, and the Chairman will formally admit him to membership.

The introduction and reception of new members will take place at any of the forthcoming Ordinary General Meetings of the Royal Institute with the *exception of the meeting on the following date* :—

3 April 1939 (Presentation of Royal Gold Medal).

OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

CONSETT, CO. DURHAM: NEW COUNCIL OFFICES

The Consett Urban District Council invite Chartered and/or Registered Architects of British nationality to submit in competition designs for new Council Offices to be erected on a site in Market Square.

Assessor: Mr. R. Norman MacKellar [*F.*].

Premiums: £150, £100 and £75.

Last day for submitting designs: 15 June 1939.

Last day for questions: 4 March 1939

Conditions of the competition may be obtained on application to Mr. T. W. Bell, Clerk to the Urban District Council, Council Offices, Consett, Co. Durham. Deposit £1 1s.

EDINBURGH: NEW EXHIBITION HALL

The Lord Provost, Magistrates and Council of the City of Edinburgh invite architects in association with consulting engineers, both resident in Great Britain, to submit in competition designs for an Exhibition Hall, to be erected on the site of the present Waverley Market, Princes Street, Edinburgh.

Assessor: Mr. Thomas S. Tait [*F.*].

Premiums: 500 guineas, 300 guineas and 200 guineas.

Last day for submitting designs: 31 August 1939.

Last day for questions: 15 February 1939.

Conditions and instructions to competitors may be obtained on application to The Town Clerk, City Chambers, Edinburgh, 1. Deposit £2 2s.

GODALMING: NEW MUNICIPAL BUILDINGS

The Godalming Borough Council invite architects of British nationality to submit in competition designs for new Municipal Offices.

Assessor: Mr. Stanley C. Ramsey [*F.*].
Premiums: £200, £150 and £100.

The last day for submitting designs has been extended to 28 February 1939.

Last day for questions: 31 October 1938.

HUTTON, NEAR PRESTON, LANCS: NEW POLICE HEADQUARTERS

The Lancashire Standing Joint Committee for Police and other purposes invite Chartered and/or Registered architects to submit in competition designs for a new General Police Headquarters and Training School to be erected at Hutton, near Preston.

Assessor: Sir Percy Worthington, Litt.D., F.S.A. [*F.*].
Premiums: £500, £400 and £300.
Last day for submitting designs: 1 May 1939.
Last day for questions: 28 January 1939.

LAGOS, NIGERIA: NEW SUPREME COURT HOUSE

The Government of Nigeria invite architects of British nationality and resident in Great Britain and Africa who are members of the R.I.B.A. or of its Allied Societies to submit in competition designs for new Supreme Courts in Lagos, Nigeria.

Assessor: Mr. A. F. B. Anderson [*F.*].
Premiums: £500, £300 and £200.
Last day for submitting designs: 30 June 1939.
Last day for questions: 14 February 1939.

Conditions of the competition may be obtained on application to The Crown Agents for the Colonies, 4 Millbank, Westminster, London, S.W.1. Deposit £1 1s.

MARGATE: NEW CIVIC CENTRE

The Corporation of the Borough of Margate invite architects of British nationality who are members of the R.I.B.A. or its Allied Societies to submit in competition designs for a new Civic Centre to be erected on a site overlooking Hartsdown Park, Margate.

Assessor: Mr. A. F. B. Anderson [*F.*].
Premiums: £500, £300 and £200.
Last day for submitting designs: 31 August 1939.
Last day for questions: 31 March, 1939.

Conditions of the competition may be obtained on application to the Town Clerk, 40 Grosvenor Place, Margate. Deposit £1 1s.

FORTHCOMING COMPETITIONS

Other competitions which it is proposed to hold, and the conditions for which are not yet available, are as follows:—

BLACKPOOL: NEW OFFICES FOR FYLDE WATER BOARD
Assessor: Professor A. C. Dickie [*A.*].

BRIGHOUSE: NEW MUNICIPAL BUILDINGS
Assessor: Mr. James R. Adamson [*F.*].

EDMONTON: NEW TOWN HALL BUILDINGS
Assessor: Mr. E. Berry Webber [*A.*].

HARROW: NEW INFECTIOUS DISEASES HOSPITAL
Assessor: Mr. E. Stanley Hall [*F.*]

OLDHAM: ELECTRICITY OFFICES AND DEPARTMENTAL BUILDINGS
Assessor: Professor R. A. Cordingley [*F.*].

WREXHAM: NEW TOWN HALL
Assessor: Mr. Herbert J. Rowse [*F.*].

MEMBERS' COLUMN

Owing to limitation of space, notices in this column are restricted to changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and appointments vacant. Members are reminded that a column in the Advertisement Section of the Journal is reserved for the advertisements of members seeking appointments in architects' offices. No charge is made for such insertions and the privilege is confined to members who are definitely unemployed.

NEW PARTNERSHIPS

Messrs. Darcy Braddell and Humphry Deane [*FF.*] have pleasure in announcing that they have taken Mr. Pelham Bird [*A.*] into partnership and that the firm will in future be carried on under the title of Braddell, Deane & Bird, architects.

It is announced that Mr. Robert Cromie [*F.*] has taken into partnership with him Mr. William C. Casse [*L.*], who has been for many years his manager and chief assistant.

Mr. Athol Hobbs, F.R.I.A.W.A. [*F.*], and Mr. Alex. B. Winning [*L.*], having retired by mutual consent from the firm of Hobbs, Forbes & Partners, hereby notify that they are practising together as architects under the name of Hobbs & Winning at West Australian Chambers, 104 St. George's Terrace, Perth. Telephone: B3557.

Messrs. Mayell & Lockton [*F/A.*] have recently taken into partnership Mr. E. M. K. Ellerton, M.A. [*A.*]. The firm will now practice under the name of Messrs. Mayell, Lockton & Ellerton [*F/AA.*]. at St. James's House, 173 Holland Park Avenue, W.11.

PARTNERSHIP OR PRACTICE WANTED

Young architect of wide experience wishes to buy a suitable partnership or practice.—Reply Box 2019, c/o Secretary R.I.B.A.

PARTNERSHIPS WANTED

A.R.I.B.A., with wide experience London, U.S.A. and New Zealand, will require partnership in well-established practice, London or Southern Counties, next October. Will firms with possible vacancy write giving particulars to Sparks & Blake, solicitors, Crewkerne, Somerset.

Experienced member, having been compelled to leave his practice in the Far East, owing to hostilities, would like to assist provincial architect with a view to partnership, or would accept responsible supervisory position. Small capital available.—Box 9128, c/o Secretary R.I.B.A.

Student R.I.B.A., Registered Architect (34), with considerable experience, last few years as principal, desires a position as partner in a practice in London, Surrey or Sussex with a good connection. Capital available. Reply Box 4139, c/o Secretary R.I.B.A.

CHANGE OF ADDRESS

FROM 1 February 1939 Mr. G. I. C. Highet [*A.*] has transferred his office to 14 Buckingham Street, Adelphi, London, W.C.2. Telephone : Temple Bar 6748.

CHANGE OF OFFICE ADDRESS

THE new address of the Croydon office of Messrs. Riches and Blythin [*AA.*] is 77 Park Lane, Croydon. Telephone number as before : Croydon 6520.

OFFICE ACCOMMODATION TO LET

ARCHITECT of many years' experience having suite of city offices, comprising three rooms fitted up in every way for professional practice, standing at a moderate rent, wishes to meet another architect who would be willing to take over the offices fitted complete on a working arrangement as to business introduced.—Reply Box 2619, c/o Secretary R.I.B.A.

ASSOCIATE wishes to let half-share of large furnished one-room office, ground floor, overlooking Westminster Embankment ; moderate rental.—Apply Box 3019, c/o Secretary R.I.B.A.

ASSOCIATE with suite of offices on first and second floor in good house in Bloomsbury Square, W.C.1, has a room size 13′ 7″ × 12′ 6″ to let to an architect, who can also have joint use of the drawing and general offices and staff by arrangement. Very reasonable rental. Apply Box 6128, c/o Secretary R.I.B.A.

MINUTES VII

SESSION 1938-1939

At the Fifth General Meeting of the Session 1938-1939, held on Monday, 23 January 1939, at 8.30 p.m.

Mr. H. S. Goodhart-Rendel, President, in the chair.

The meeting was attended by about 200 members and guests.

The Minutes of the Fourth General Meeting, held on Monday, 9 January 1939, having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The President having delivered his Address to Students, a vote of thanks was passed by acclamation on the motion of Mr. H. G. Strauss, M.P., seconded by Professor A. E. Richardson, A.R.A., F.S.A. [*F.*], and was briefly responded to by the President.

The presentation of prizes was then made by the President in accordance with the Council's award.

The proceedings closed at 9.40 p.m.

Architects' and Surveyors' Approved Society

ARCHITECTS' ASSISTANTS' INSURANCE FOR THE NATIONAL HEALTH AND PENSIONS ACTS

Architects' Assistants are advised to apply for the prospectus of the Architects' and Surveyors' Approved Society, which may be obtained from the Secretary of the Society, 113 High Holborn, London, W.C.1.

The Society deals with questions of insurability for the National Health and Pensions Acts (for England) under which, in general, those employed at remuneration not exceeding £250 per annum are compulsorily insurable.

In addition to the usual sickness, disablement and maternity benefits, the Society makes grants towards the cost of dental or optical treatment (including provision of spectacles).

No membership fee is payable beyond the normal Health and Pensions Insurance contribution.

The R.I.B.A. has representatives on the Committee of Management, and insured Assistants joining the Society can rely on prompt and sympathetic settlement of claims.

Architects' Benevolent Society

66 PORTLAND PLACE, W.1

FOUNDED 1850

The object of the Society is to afford assistance to architects, architects' assistants, and their widows and children by means of grants and pensions.

Subscriptions and donations of any amount are urgently needed. An annual subscriber of £1 1s. is entitled to recommend annually two applicants for relief.

A.B.S. INSURANCE DEPARTMENT

PENSION AND FAMILY PROVISION SCHEME FOR ARCHITECTS

This scheme has been specially designed by the A.B.S. Insurance Committee for members of the R.I.B.A. and its Allied and Associated Societies. It provides :—

1. A pension for members on retirement at age 65.
2. Widows' pension—payable to the widow from the time when, if the member had lived, he would have attained age 65.
3. Family protection—if the member dies before age 65 a yearly payment is made to his dependants from the date of his death till Benefit No. 2 becomes available.

The benefits may be purchased in units of £50 per annum up to a maximum of £500 per annum.

Please write for full particulars to the Secretary, A.B.S. Insurance Department, 66 Portland Place, London, W.1. Telephone : Welbeck 5721.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions of Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A. and crossed.

Members wishing to contribute notices or correspondence must send them addressed to the Editor not later than the Tuesday prior to the date of publication.

Back numbers of the JOURNAL can be obtained at the price of 1s. 9d., including postage throughout the world. For orders of more than six copies discounts are given. Orders must be prepaid.

R.I.B.A. JOURNAL

DATES OF PUBLICATION.—1939.—20 February ; 6, 20 March ; 3, 24 April ; 8, 22 May ; 12, 26 June ; 17 July ; 14 August ; 18 September ; 16 October.

Supplement to THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS *February 6, 1939*

BUILDING SCIENCE

QUESTIONS *and* ANSWERS

NOTES FROM THE INFORMATION BUREAU OF THE BUILDING RESEARCH STATION*

(4th Series, No. 7)

From time to time there have been included in these Notes discussions of selected topics not necessarily related to specific questions addressed to the Station, but rather a reflection of a body of inquiries submitted. There are a number of such topics which it is thought could usefully be discussed in that way, and it has therefore been decided that for a period of twelve months or so these Notes shall take the form essentially of such discussions. It is not intended, however, to adhere rigidly to this form, for any inquiries of special interest that may be received by the Station during the period will be dealt with as before.

DIRECTOR OF BUILDING RESEARCH.

NATURAL STONE MASONRY
PART II—ITS DECAY, PRESERVATION AND REPAIR

The following note is a summary of available knowledge—the treatment is not exhaustive. It is presented in the hope that it may be found useful as a convenient résumé of existing information.

Careful selection of building stone, proper design and periodic washing can do much to ensure that masonry buildings weather well and preserve a good appearance. The renovation of stonework, however, is a problem which most architects are called upon to tackle at some time or another, for want of attention to these matters in the past. The following notes on the cleaning, repair and preservation of stone masonry cover the main points which need consideration in this kind of work. Attention is restricted to the treatment of the relatively superficial injuries of stone due to the action of weathering agencies. Major structural injuries, resulting from subsidence, vibration or excessive concentrations of stress, are not discussed. The operations dealt with in the note, involving, as they do, the services of specially trained craftsmen and skilled supervision, are often entrusted to specialist firms—a matter which is referred to later.

FORMS OF DECAY OR DISFIGURATION

An old masonry structure, whether it be a church or hall, a bridge, a statue or a pedestal, may exhibit some or all of the following forms of decay or disfiguration arising from causes enumerated in Part I.

Injuries due to frost.—Flaking or severe crumbling of exposed features—parapets, string courses, cornices, upper surfaces of buttresses, retaining walls, etc.

Injuries due to salt action and skin formation.—General surface powdering or crumbling, peeling of hard skins, loss of mortar from joints.

Vents.—The term "vents" is applied to veins or planes of potential weakness in stones which often open up on weathering.

Deposits and discoloration.—General blackening, growth of slime and moss, formation of heavy masses of soot and decay-products in sheltered positions: beneath window heads, sills and throatings.

In some instances—as, for example, the total or partial destruction of highly exposed decorative features—the injuries may be due to a variety of causes acting in combination.

Cracking due to corrosion.—A common kind of injury is the cracking of cornices, columns, etc., due to the use of iron or steel cramps, which rust and burst the stone in which they are bedded. The cramps or dowels must be replaced by bronze or other non-corrosive metal set in suitable mortar.

At the outset a decision must be taken as to the nature and extent of the renovation required. In one case it may be decided that the work must be restored as nearly as possible to the original condition and appearance. In another it may be

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desired merely to repair the deepest injuries. The actual effect desired must be understood between architect and client.

The next step is to make a detailed survey of the structure in order to discover the extent and decide the cause of the various injuries, each of which must receive its appropriate treatment. If defects in design are found, the possibility of correcting them is the first matter which should receive attention. It is useless to renew or repoint stone if the cause of the injury is not removed. Many injuries may be traced to defects which have developed in flashings, gutters, rainwater pipes. These must, of course, be repaired. These points having been attended to, the work will then fall under one or more of the following heads: Cleaning, Repair, Pointing, which are discussed in the following pages, together with the subject of Preservatives for Stonework.

CLEANING

Methods of Cleaning

The methods used for cleaning buildings which are described below are intended for the removal of deposits accumulated during long periods of exposure. They must not be confused with the periodic washing for maintenance purposes described in Part I.

They all depend on the use of clean water and clean water alone, without the addition of any chemicals. Solutions of caustic soda, washing soda or other highly alkaline cleaning preparations are sometimes used, ill-advisedly, to minimise labour. These substances soften the surface films consisting of soot and decay products and allow of their ready removal by brushing. The initial effect of such treatment may be most pleasing, but the subsequent effect on the stone may be disastrous. Reference has already been made to decay caused by absorption of soluble salts, of which sodium sulphate is one of the most damaging, and formation of sodium sulphate in the stone will follow from the use of caustic soda or washing soda in cleaning. The objection to the use of such alkalis will thus be realised. In a number of cases severe decay has started in masonry (which previously was sound and durable) as a result of the use of alkalis, and the use of these substances should not be permitted. There is a temptation to use alkalis on areas which prove refractory with other cleaning methods, but it should be resisted.

The dangers associated with the use of alkalis are now fairly well recognised and firms specialising in cleaning and restoration are prepared to guarantee that no alkalis will be used. It is considered that such guarantees should always be obtained.

The various methods of cleaning with water may be described under the following headings:—

(*a*) Scrubbing with water.
(*b*) Spray treatment.
(*c*) Steam cleaning.

(*a*) *Scrubbing with water.* The use of fresh water, assisted by vigorous brushing, is sufficient to restore a building to a relatively clean condition. The process not only removes the dirt but also, if soluble salts are present, effects their partial removal and so reduces the *rate* of decay. The condition of the stone is thereby improved.

The ordinary water-cleaning process suffers from certain disadvantages. Some deposits are almost impossible to remove by the ordinary method and the vigorous brushing or scrubbing involved may cause damage to delicate carvings. Furthermore, in carved work it may be impossible to reach the deeply cut portions where the heaviest deposits may occur.

(*b*) *Spray treatment.* With limestones, the efficiency of water-cleaning may be greatly improved if opportunity is allowed for the water to soften the deposits. If a fine spray of water is played for a sufficient time on the surface of the stone covered with the usual black deposits it will be found that the skin will be so softened that it can be completely removed with a soft paint brush. The period of spraying required varies according to the nature of the stone and its condition. In some instances half an hour may be sufficient and it was found, for example, that a piece of Cotswold stone, which could only with difficulty be cleaned by chemical treatment, required only half-an-hour's spraying to enable the surface deposits to be completely removed. A sample of weathered Caen stone was cleaned after an hour's spraying without the least damage. In other cases, for example, dirty Portland stone, the period required may be two hours or longer.

The process has recently been used on several important limestone buildings and has proved very successful. The Adam screen in front of the Admiralty building in Whitehall was cleaned in this way and the fact that all the incrustations formed during 150 years' exposure to the London atmosphere were removed without the slightest injury to delicate details of carving on the frieze is striking evidence of the value of the process.

(*c*) *Steam cleaning.* The use of steam jets facilitates the cleaning of masonry and generally effects a more perfect renovation than the ordinary water-washing process. The method is now widely adopted. Suggestions have been made that the heating can cause immediate mechanical damage

but there is no proof of this. The steam cleaning process tended to fall for a time into disfavour because of cases where, after treatment, the stone suffered from efflorescence and decay. This was wrongly attributed to the effect of steam, whereas it was really due to the use of alkalis to expedite the work. Where steam alone has been used the result has been at least as satisfactory as the more laborious method of scrubbing with water.

Staining

Soot deposits contain soluble brown substances which may be absorbed by the stone during natural weathering or during the cleaning process. Within a little while after a building has been cleaned irregular brownish stains which are somewhat disfiguring may appear. Portland stone of some age has been known to behave in this way. In the natural process of weathering, the stains slowly disappear and it is likely that their removal can be accelerated by occasional hosing.

Effectiveness of the Cleaning Process on Various Types of Stone

Cleaning processes are all far more effective with any kind of limestone than with sandstones or other stones which can be classed as "insoluble." Limestones form thick incrustations, consisting partly of soluble material, which are softened by the action of water, particularly in method (*b*) which involves prolonged spraying; but on sandstones a thin soot film is formed which is deeply ingrained and difficult to remove. Some improvement can always be effected by washing or steam cleaning and often very good results are obtained. In cases of doubt a trial of the process by a competent firm on an inconspicuous portion of the work should be arranged. If the results are not satisfactory no attempt must be made to improve matters by the use of alkalis. The effects on sandstone may be even more serious than with limestone.

PRESERVATIVES FOR STONEWORK

There is a widespread demand for some substance which can be applied to the surface of masonry to prevent it from decaying, but experience does not afford much hope that any effective treatment will be discovered. An exception must be made in the case of paint which if maintained can preserve stone indefinitely, but this, of course, entirely masks the character of the material.

The methods offered for stone preservation fall into three main categories:—

(1) Processes for hardening the surface by silicates or similar substances, sometimes applied as a two-solution treatment.

(2) Processes depending on waterproofing the surface by the application of oils or waxes or solutions of the same.

(3) Sterilising treatments, depending on the use of bactericides or fungicides with the object of destroying the supposed organisms of decay.

The two chief sorts of treatment—(1) and (2)—both have the disadvantage of forming a skin of different properties from the rest of the stone, and so can accelerate any natural tendency to flaking.

Practical experience of all the methods with buildings has been disappointing and there is no evidence that any of the "preservatives" tested exert any permanently beneficial effect. The only "preservative" that can be unreservedly recommended is pure water, applied, either in the form of liquid or vapour, for the purpose of *cleaning*, and regular washing will enable stone to give the best service of which it is capable under the conditions to which it is exposed.

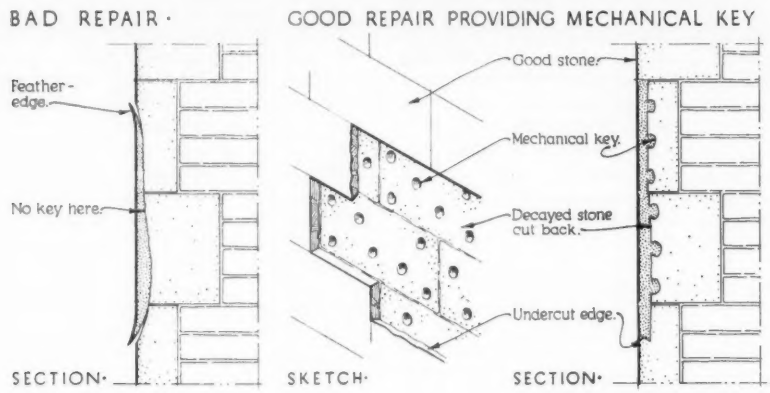
For small masses of stone which are of particular value or interest, and can be treated and kept under observation, the treatment being renewed as required, there are certain substances which may possibly do some good, but the special care and periodical renewal that can be arranged in such cases is probably impracticable with buildings.

REPAIR

The restoration of any badly decayed structure will involve either replacement or plastic repair of stone. Which method will be adopted will depend upon the depth and overall extent of injury and upon the general character of the building.

If it is found that some stones have been much more seriously affected than the rest of the work, and if there is no external cause for their poor behaviour, it must be concluded that they are of poorer quality than the rest and they should be replaced by new. In the case of decorative features which are exposed to severe weathering it may be cheaper to replace with new stones than to attempt the rather costly plastic repairs that would be required, but generally plastic repairs are cheaper than replacement.

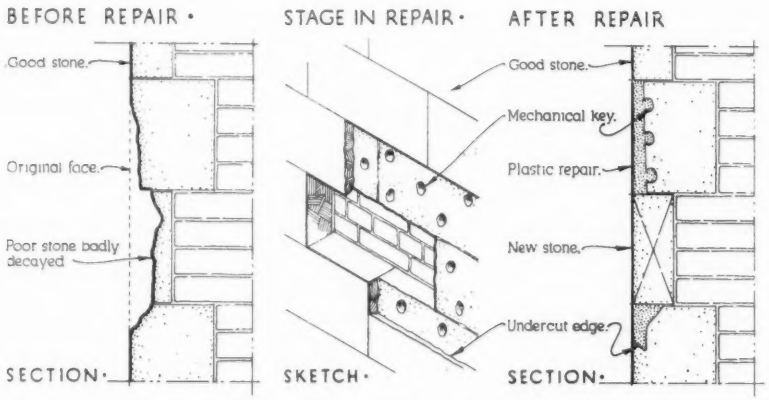
In making replacements, stone should be used which is similar in type and texture to that which, in the building under consideration, has weathered best. Obviously limestone should not be repaired by inserting sandstone and close-textured stone should not be replaced by open-textured stone, or vice versa. If stone from the same beds as that originally used can no longer be obtained the



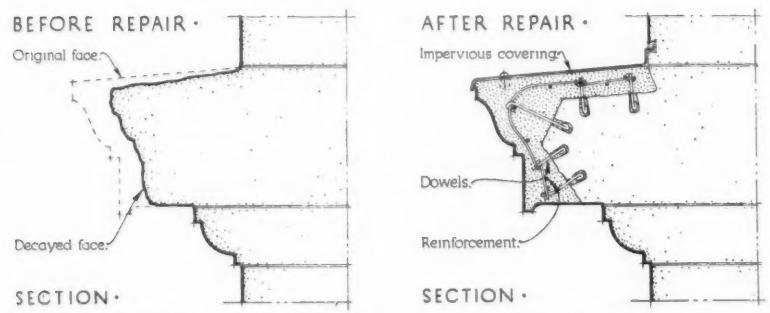
Feather-edges curl away especially if applied to a weak surface.

Mechanical keys provide firm anchorage and feather-edges are avoided

Good and bad methods of plastic repair



Restoration by plastic repair and replacement



Material for repair is supported by dowels and strengthened with reinforcement. Impervious covering added to prevent further decay.

Heavy plastic repair to cornice using reinforcement.

Figure 1

choice may be difficult and it may be necessary to seek technical advice.

A great deal of the restoration required may be accomplished by the use of plastic materials for refacing stones only superficially attacked, for making good fissures and cavities in otherwise sound stone, or even for restoring moulded work the detail of which has been entirely obliterated. Restoration by plastic material has often incurred deserved criticism, owing to the use of unsuitable substances or unskilful workmanship. Actually, when proper material is carefully used, plastic repair is quite unobjectionable for it permits restoration to be carried to any desired standard of newness and can be so successful that the new work is—and remains—indistinguishable from the old.

The materials oftenest used are:—

(1) Mortars based on Portland cement. The aggregate used may be sand or sound natural stone, similar to that being repaired, crushed to a suitable degree of fineness. Lime putty may also be incorporated.

(2) Mortars having a special cement such as zinc oxychloride as a binder. Aggregates similar to those mentioned above are used.

The chief faults in masonry repairs can perhaps best be avoided by observing the warning against putting a new piece of cloth in an old garment. The mortar used should be such as, when set and hardened, will have characteristics as closely similar as possible to those of the adjacent stone. The resemblance must extend, not only to colour and surface texture, but also to porosity and strength. The same principle is to some extent applicable to the jointing and pointing of masonry.

Other practical points in connexion with plastic repairs, some of which are illustrated in Figure 1, are as follows:—

(1) No attempt must be made to cover soft, decayed stone with repairing material. All affected stone must be cut back to sound stone capable of retaining and restraining a mass of applied mortar.

(2) Thin layers of repair must not be used. All mortars shrink on drying and sufficient thickness must be used to enable some support to be obtained from adjacent stone. In particular, repairs must not be worked to a feather-edge, but preferably should be undercut into sound stone.

(3) Good adhesion must be secured between the natural stone and the added repair. Light repairs may be adequately secured by priming or grouting the cavities to be filled. Heavier repairs may necessitate the use of non-corrosive metal dowels. Projecting masses of considerable size may in addition need to be reinforced by metal rod, suitably disposed.

POINTING

The repair of an old building almost always involves some repointing and the mortar used must be chosen with care and used with skill or the results will be unsatisfactory. The process of filling up joints and repointing stone resembles, if it is not identical with, plastic repair, and what is said of one applies also to the other.

A good rule is that mortar used in jointing should neither be stronger nor denser than the stone which it binds. Sometimes the attempt is made to compensate for the weakness of the stone by increasing the strength of the joints or pointing: the mortar is then preserved at the expense of the stone. Preferably the mortar should allow a slight yielding of the masonry joints: the risk of major structural cracking is then reduced.

Space will not allow of a detailed study of mortar specifications, but it must suffice to say that the strength and texture of joints can be adjusted by:—

(1) The use of white lime and cement in varying proportions to yield a mortar as strong or as weak as may be required.

(2) The use of hydraulic lime, which, suitably treated, will yield a joint of medium strength and density often very suitable for jointing or repointing.

(3) The use of sand for dense mortar or crushed stone (Portland stone, sandstone, etc.) for open-textured mortar.

For the strongest stone, such as granite, plain cement mortar will be suitable, but for Portland or Bath stone this would be too strong. Crushed stone is generally used as aggregate in jointing limestones.

A common error in masonry repairs consists in the use of dense pointings and it is easy to see by what line of reasoning this course comes to be adopted. In an old building the joints are generally much more decayed than the stone. From this it is concluded that the mortar was too weak. Actually, the mortar has served to act as a safety valve for moisture and salts in the masonry. If this outlet is sealed the decay spreads from the pointing sideways into the stone and in a decade or so the work may be in a worse condition than if it had been left alone.

The foregoing account of the treatment of old masonry will have sufficiently indicated that much

of the work involved requires a high degree of skill and experience. The preparation of a specification for such work is a matter of great difficulty and the cost of supervision is considerable. For this reason it is often convenient to entrust such work to firms who have specialised in stone cleaning and restoration and are prepared to guarantee the results. Even so, it has been thought that a brief statement of the principles involved and of the kinds of restoration which are possible would be welcomed: the present note should be regarded rather as a statement of principles than as the basis for specifying the actual materials and labours required.

The following notes have been published in the current series:

No. 1.—The Design of Timber Floors to Prevent Dry Rot
No. 2.—The Design of Concrete Floors to Reduce the Transmission of Sound
No. 3.—The Cure of Smoky Chimneys
No. 4.—External Rendered Finishes
No. 5.—The Thermal Insulation of Buildings, Part I—General Principles
No. 6.—Natural Stone Masonry, Part I—Its Decay, Preservation and Repair

Copies of past issues can be obtained from the Royal Institute of British Architects, price 6d. a copy—for orders of more than six copies special rates will be given.

Librarian—Editor R.I.B.A.

VOLUME 4